Summary of
Cotton Fiber and Processing Test Results

CROP of 1981

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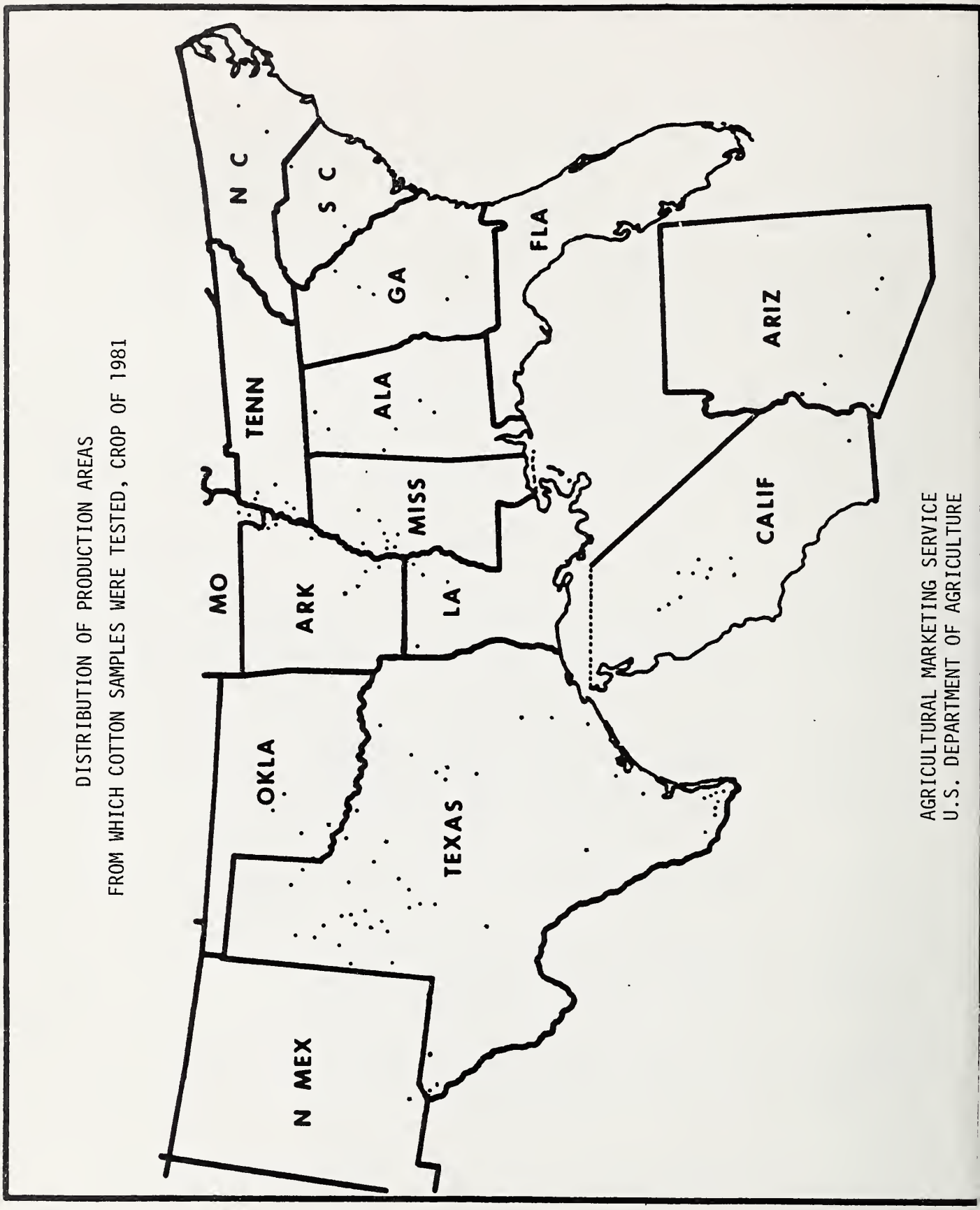

Figure 1. Location of production areas selected for the 1981 survey.

SUMMARY OF COTTON FIBER AND PROCESSING TEST RESULTS CROP OF 1981

INTRODUCTION

This report contains information on the fiber properties and spinning performance of cotton from major commercial production areas of the United States. Similar reports have been published annually since 1946.[1/] These reports summarize and add supplemental information to the data published in biweekly reports which were titled "Cotton Fiber and Processing Test Results, Crop of 1981" and numbered 1 through 13.

The results of fiber and spinning tests made in connection with these annual surveys provide data for studies of the relationships between fiber properties, processing performance and product quality. The data is used to measure the effectiveness of the standards to be sure that they continue to reflect differences in utility. The biweekly reports enable merchants and manufacturers to use the results to locate sources of cotton to meet their specific requirements. Farmers and breeders may also use the data as a source of quality information regarding the various varieties of cottons produced under commercial growing conditions.

SAMPLING PROCEDURES

The procedure for selecting samples for the 1981 survey was designed to provide test lots representing all major varieties in each of the territories served by Cotton Division Marketing Services Offices (MSO). Variety selections were based on the predominant varieties planted in each MSO territory as reported by the Cotton Division in "Cotton Varieties Planted, 1981 Crop." A production area was selected to represent the leading variety and one to represent each of the other varieties with an expected production of 10,000 bales or more in each MSO territory. Additional areas were selected for those varieties with a production of over 200,000 bales. One additional production area was selected for each 200,000 bales or portion thereof in excess of the first 200,000 bales. Production areas with at least 70 percent of one variety were designated as that variety with no attempt made to maintain the purity of the variety except by selection of representative production areas. However, in some cases where there was an unusual interest in a particular variety and a low percentage was planted in the area, the MSO selected lots representing 100 percent of the variety. The locations of the 122 production areas selected for the 1981 survey are shown in Figure 1.

1/ Copies of past summary reports may be obtained from the Testing Section, Cotton Division, AMS, USDA, P.O. Box 67, Clemson, SC 29631, until supplies are exhausted.

Two test lots were collected from each production area during the harvest season. Lots were selected to represent the predominant grade and staple being classed at the time of collection. For the most part, these areas produce the specified qualities in quantities large enough to enable buyers to obtain lots of even-running grade and staple. Obviously, other qualities of cotton are available in each area as a result of normal seasonal, soil, harvesting and other variations. Most production areas also produce cotton of varieties other than those included in these tests.

Each spinning lot used in this study was made up of 20 to 30 samples of the same grade and staple length from bales classed for growers under the Smith-Doxey Act. These even-running lots of samples were then tested at the Cotton Division's Fiber and Spinning Laboratory located in Clemson, South Carolina. While this method of collecting samples does not provide data for all qualities in the crop, it does provide average test results for those qualities in largest supply during the collection period.

LABORATORY PROCEDURES

Fiber, spinning and chemical finishing tests were performed under standardized procedures at the Cotton Division's Fiber and Spinning Laboratory in Clemson. Most of the fiber tests were performed in the standard atmospheric conditions of 65 percent relative humidity and temperature of 70 degrees F. Standard test procedures as outlined by the American Society for Testing and Materials were used in making tests. Tests not covered by ASTM were performed using commonly accepted procedures as recommended by the instrument manufacturer. Five subsamples were taken at random from each spinning lot to provide representative specimens for the fiber tests.

Yarn processing or spinning tests were performed by a technique developed in the Cotton Division laboratories for processing small lots of cotton on standard-type textile machines. The samples in each lot were thoroughly composited by hand-mixing before being fed to the first process picker. This hand-mixing is similar to the machine-mixing normally obtained in cotton textile opening equipment. Observations were made at each process to measure processing behavior and the yarns produced were tested to measure product quality.

On the basis of average past performance, cottons were grouped according to the expected staple length for the specified variety. All cottons of the specified variety were spun in the same manner, regardless of difference in staple length. This was done so that direct comparisons of different lots of cotton within a specified variety could be made. These samples were carded at specified production rates and spun into numbers that reflect the manufacturing values of the varieties tested. In general, the rate of carding and yarn numbers from the 1981 crop are as follows:

Group 1 - Short staple cottons, carded at 12-1/2 pounds per hour and spun into carded 8s and 22s yarns with a twist multiplier of 4.40 plus a carded yarn spinning potential test for all lots. This includes varieties which normally produce staple lengths 31/32 inch and shorter.

Group 2 - Medium staple cottons, carded at 9-1/2 pounds per hour and spun into carded 22s and 50s yarn with a twist multiplier of 4.00 plus a carded spinning potential test for all lots. This group includes varieties which normally produce cottons from 1 inch through 1-3/32 inches in staple length.

Group 3 - Long staple cottons, carded at 6-1/2 pounds per hour and spun into both carded and combed 22s and 50s yarns with a twist multiplier of 3.80 plus a carded yarn spinning potential test for all lots. This group includes upland varieties which normally produce cottons from 1-1/8 inches through 1-1/4 inches in staple length.

Group 4 - Extra long staple cottons, carded at 4-1/2 pounds per hour and spun into combed 50s and 80s yarns with a twist multiplier of 3.60. This group includes all American Pima and American upland extra long staple varieties which are usually 1-5/16 inches or longer in staple length.

Samples of finisher drawing sliver from each spinning lot were bleached and dyed by a technique developed in the Cotton Division laboratories for small-scale finishing tests. Color tests were made on gray and chemically finished samples of finisher drawing sliver as measures of their bleaching and dyeing behavior.

DISCUSSION OF TEST RESULTS

U.S. Average - Upland Cotton

Results for all short, medium and long staple cottons tested during the season were included in the U.S. upland average. A total of 235 spinning lots was tested from the 1981 crop compared to 413 from the 1980 crop. Fiber test results showed these cottons to be a little longer than the year before with the same average length uniformity and mike reading. Fiber strength as measured at zero gage break was lower while 1/8-inch gage strength was unchanged. Both Shirley Analyzer nonlint content and picker and card waste were a little higher than in the previous season. Yarns processed from the 1981 upland cottons had higher skein strength and appearance grades than the 1980 cottons. The average spinning potential yarn number was also higher.

Group 1 - Short Staple Cottons

A total of 58 American upland short staple spinning lots was tested from the 1981 season compared to 104 from the 1980 crop. Both the fiber length and length uniformity of these samples remained the same. The micronaire reading averaged lower than in the previous season. Zero gage fiber strength was lower while 1/8-inch gage strength was slightly higher. Both nonlint content and manufacturing waste were a little higher than in the 1980 season. Yarns spun from the 1981 samples were slightly stronger with lower appearance grades. The average spinning potential number increased significantly over the 1980 average.

Group 2 - Medium Staple Cottons

A total of 169 medium staple American upland spinning lots was tested from the 1981 crop compared to 295 in 1980. Fiber tests showed the 1981 crop cottons to be slightly longer with the same average unifomity ratio. Mike readings averaged higher in 1981 while the fibers were weaker at both zero gage and 1/8-inch gage break. Both nonlint content and picker and card waste were higher than a year earlier. Yarn quality of all medium staple cottons showed some improvement in 1981 as indicated by higher skein strength, higher appearance grades and a higher average spinning potential yarn number. The average number of neps per thousand yards of yarn averaged lower than in the preceding season.

The Southeastern production area includes the states of North Carolina, South Carolina, Georgia and Alabama. A total of 24 lots was tested during the 1981 season compared to 35 lots during the 1980 season. Laboratory tests showed the fibers to be slightly longer and more uniform than those tested from the previous crop. The average micronaire reading was higher. Zero gage fiber strength was lower while 1/8-inch gage was unchanged from a year earlier. Shirley Analyzer nonlint content was lower as was picker and card waste. Yarn quality for the 1981 season was improved as reflected by higher skein strength, higher appearance grades and a higher average spinning potential.

The South Central production area includes the states of Tennessee, Missouri, Arkansas, Louisiana and Mississippi. A total of 58 spinning lots was tested from the 1981 crop compared to 92 from 1980. Test results on these 58 lots showed the fibers to have the same length as in the previous season. The average micronaire reading was only slightly lower. Fiber strength was lower when measured at zero gage break and unchanged at 1/8-inch gage break. Nonlint content was a little lower while manufacturing waste was slightly higher compared to the previous year. Yarn skein strength was higher while the average appearance grade was unchanged. The number of neps per thousand yards of yarn was higher than in the previous season. The spinning potential yarn number was also higher.

The Southwestern production area is comprised of Oklahoma and all but the far western counties of Texas served by the El Paso Marketing Services Office. Forty-eight medium staple spinning lots were tested compared to 64 from the 1980-81 season. Fiber test results showed the cottons to be longer and as uniform as those tested a year earlier. The average micronaire reading was unchanged while the zero gage fiber strength was lower. However, 1/8-inch gage strength results averaged slightly higher. Both nonlint content and processing waste were higher than in the previous season. Yarn skein strength was higher while appearance grades were lower. The spinning potential number showed a significant increase over the 1980 average.

The Western production area includes the states of Arizona, California, New Mexico and far West Texas. A total of 39 medium staple samples was tested from the 1981 crop compared to 104 in 1980. These samples had the same length, uniformity ratio and fiber strength as in the previous season. Shirley Analyzer nonlint content also remained unchanged. Yarns processed from the 1981 crop samples were weaker with a slightly lower spinning potential number than those tested from the 1980 crop. There were fewer neps per thousand yards of yarn spun.

Group 3 - Long Staple Cottons

Average test results for all long staple spinning lots tested from the 1981 season show the fibers to be longer, slightly more uniform and coarser than those tested from the 1980 crop. The samples had lower nonlint content and picker and card waste. Yarn strength was higher than a year ago as was the average number of neps produced. Appearance grades were lower but the average spinning potential number from these yarns was significantly higher.

Six long staple spinning lots from the Southeast were tested from the 1981 crop compared to 9 during the 1980 season. Test results show the fibers to be longer with a higher average micronaire reading. Zero gage fiber strength was lower for these cottons while 1/8-inch gage strength was unchanged. Machine waste was lower than a year ago. Yarn qualities were much improved as indicated by higher skein strength, higher appearance grades and significantly higher spinning potential numbers.

Only two long staple spinning lots were tested from the Western area from the 1981 crop, unchanged from the year before. Fiber characteristics remained about the same. The yarns spun from these cottons were slightly weaker with lower spinning potential numbers than the year before.

Group 4 - Extra Long Staple

Twelve American Pima extra long staple spinning lots were tested from the 1981 cotton crop compared to 15 from the 1980 crop. The fibers were shorter with about the same CV, average micronaire, and fiber strength as in the 1980 season. Shirley Analyzer nonlint content was lower as was processing waste. Combed yarn test results showed the yarn skein strength to be unchanged from the 1980 average. The yarn had lower appearance grades and fewer neps than a year earlier.

DESCRIPTION OF TABLES

Most of the tables are in two parts located on separate pages. The first page gives fiber measurements and the next gives yarn measurements. Using Table 5 as an example, the first spinning lot is from Aquilla, Texas. The fiber measurements are on page 29. The yarn measurements for that same lot are on the following page.

TABLE 1

Shown in Table 1 (page 11) are averages for fiber and processing test results from selected gin points for the 1980 and 1981 cotton crops. These data are grouped by staple and area.

TABLE 2

Table 2 shows the fiber and carded yarn properties by area, staple and state for the 1980 and 1981 crops. The "coarse" and "fine" headings in this table refer to different size yarns according to the staple group.

TABLE 3

Beginning on page 21, Table 3 shows 1981 crop data by staple, grade and area. For statistical purposes, only grade and staple combinations with three or more lots are reported.

TABLE 4

Table 4 gives fiber and yarn test results by variety from selected gin points. As indicated in the section on sampling procedures, the production areas selected must have at least 70 percent of one particular variety in order to be selected. In many cases a production area will be a 100 percent or "pure" variety gin. Test data for the pure varieties are presented in Table 4 to provide as meaningful information as possible for specific varieties.

TABLES 5 THROUGH 8

These tables show test results on individual spinning lots from each production area. Results on short, medium, long and extra long staple groups are given in Tables 5, 6, 7 and 8, respectively. Spinning results on short staple cottons spun on an open-end spinning frame are shown in Table 5a. Table 7a contains combed yarn quality characteristics of cotton in the long staple group.

TABLE 9

Table 9 gives the means and standard deviations for all test results by staple group. Data not reported in this summary is indicated by either a blank space or a dash (-) in place of the data. For instance, on page 72 of Table 9 there is no combed yarn data under short or medium staple groups. This summary does not report combed yarn data for these staple groups.

TABLES 10 THROUGH 12

These tables show the results of simple correlation analyses for fiber and processing tests. An explanation of simple correlations is contained in the section on "Description of Statistics Used in Analysis," page 91. To look up a particular correlation, find one of the variables in question in the heading and then read down the left margin until the second variable is located. The simple correlation coefficient is given at the intersection (i.e., the column and row intersection).

TABLES 13 THROUGH 15

A complete explanation of the multiple regression technique is given in the section, "Description of Statistics Used in Analysis," page 91.

Regression equations for estimating spinning performance and yarn quality (dependent variables) from fiber test measuremnts (independent variables) are shown in Tables 13 - 15. For each dependent variable, five equations were developed. The dependent variables are expressed in terms of:

(1) The best one-independent variable equation
(2) The best two-independent variable equation
(3) The best three-independent variable equation
(4) The best four-independent variable equation
(5) The best five-independent variable equation

For example, Table 13, page 80, the best two-independent variable equation for total picker and card waste is expressed:

Total picker and card waste = 17.34 -.17 (grade)
+.50 (color of raw stock, yellowness (+b))

The standard error of estimate and coefficient of determination (R^2) for this equation is .84 and .72, respectively. The R^2 indicates that 72 percent of the variation in total picker and card waste can be explained by grade and the +b measurement of the color of raw stock.

The best five-independent variable equation for total picker and card waste is expressed:

Total picker and card waste = 25.03 -.10 (grade)
-.14 (uniformity)
+.29 (Shirley Analyzer nonlint)
-.09 (color of raw stock (Rd))
+.32 (color of raw stock (+b))

The standard error of estimate and R^2 for this equation are .80 and .76, respectively. These five-independent variables explain 76 percent of the variation in total picker and card waste. This example shows that adding uniformity, Shirley Analyzer nonlint content, and color of raw stock (Rd) to the regression equation explained only four percent more of the variation in total picker and card waste than grade and color of raw stock (+b) in the two-independent variable equation.

An independent variable may be selected for one equation and then not selected for the next equation. This is a result of the regression technique used. The technique used attempts to maximize R^2 by selecting the best combination of independent variables. An independent variable is selected based on its contribution in explaining the variation in the dependent variable. A variable's contribution may be influenced by the introduction of other variables into the equation. For example, Table 13, page 81, with appearance 8s yarn as the dependent variable, grade was selected as the independent variable which gave the best R-square (.29) for a one-variable equation. However, the equation on the next line shows the two-independent variables with the best R-square to be micronaire and 1/8-inch gage elongation. In this case, grade was dropped from the two-variable equation. Grade didn't enter into the equation again until the four-variable model.

TABLE 16

This table gives the standard machine settings and laboratory atmospheric conditions for each phase of yarn processing used in these tests. The data is grouped by staple lengths.

TABLE 1.--COTTON: AVERAGE RESULTS OF CLASSIFICATION, FIBER, AND PROCESSING TESTS FROM SELECTED GIN POINTS, CROPS OF 1980 AND 1981.

AREA AND CROP YEAR	NO. OF LOTS	FIBER TESTS RESULTS: CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		SHIRLEY ANALYZER NONLINT	PROCESSING TESTS RESULTS: PICKER & CARD WASTE	SKEIN STRENGTH 22s	YARN APPEARANCE 22s	YARN NEPS 22s	SPY NO.
		GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE						
	NO.	INDEX	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	LBS.	INDEX	NO.	NO.
SHORT STAPLE - AMERICAN UPLAND														
1980	104	88	31.1	0.98	44	41	88	21	4.6	7.9	94	111	35	44
1981	58	84	31.4	0.98	44	37	83	22	4.7	8.1	95	104	36	50
MEDIUM STAPLE - AMERICAN UPLAND														
SOUTHEAST														
1980	35	88	34.0	1.06	44	46	91	23	3.4	7.4	98	96	74	48
1981	24	92	34.3	1.08	45	49	86	23	2.8	7.0	105	105	68	57
SOUTH CENTRAL														
1980	92	89	34.8	1.09	43	47	92	23	3.3	7.3	98	96	71	48
1981	58	91	34.9	1.09	44	46	88	23	3.2	7.5	106	96	83	59
SOUTHWEST														
1980	64	92	32.2	1.02	44	40	86	22	3.6	7.5	99	89	71	47
1981	48	86	33.8	1.07	44	40	83	23	4.0	8.1	105	86	76	62
WEST														
1980	104	98	35.4	1.10	44	43	93	25	2.6	6.5	118	79	106	63
1981	39	97	35.2	1.10	44	44	93	25	2.6	6.5	113	97	76	62
U. S. AVERAGE MEDIUM STAPLE														
1980	295	93	34.3	1.07	44	44	91	24	3.1	7.0	105	88	84	53
1981	169	91	34.6	1.08	44	45	87	23	3.2	7.4	107	95	77	60

TABLE 1.--CONTINUED

AREA AND CROP YEAR	NO. OF LOTS	FIBER TESTS RESULTS								PROCESSING TESTS RESULTS				
		CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		SHIRLEY ANALYZER NONLINT	PICKER & CARD WASTE	SKEIN STRENGTH 22s	YARN APPEARANCE 22s	YARN NEPS 22s	SPY NO.
		GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE						
	NO.	INDEX	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	LBS.	INDEX	NO.	NO.
LONG STAPLE - AMERICAN UPLAND														
SOUTHEAST														
1980	9	87	33.7	1.05	43	43	90	23	3.5	8.8	90	106	26	46
1981	6	93	35.3	1.12	44	46	83	23	3.2	7.7	104	112	28	63
WEST														
1980	2	95	37.0	1.18	46	40	90	26	2.7	7.6	138	115	31	99
1981	2	96	37.5	1.18	46	38	91	26	2.6	7.5	132	95	19	80
U. S. AVERAGE LONG STAPLE														
1980	14	89	34.6	1.09	44	43	91	24	3.3	8.6	100	111	23	56
1981	8	94	35.9	1.13	45	44	85	24	3.0	7.6	111	108	26	68
U.S. UPLAND AVERAGE														
1980	413	91	33.5	1.05	44	43	90	23	3.5	7.3	102	95	70	51
1981	235	89	33.8	1.06	44	43	86	23	3.6	7.5	104	97	67	58
EXTRA LONG STAPLE - AMERICAN PIMA				ARRAY										
				UQL	CV						50s COMBED YARN DATA			COMBER WASTE (PCT.)
1980	15	3	46.1	1.53	31	38	103	35	3.4	7.8	68	121	82	15.3
1981	12	3	46.0	1.48	32	37	102	34	2.5	7.2	68	114	9	15.0

TABLE 2.--COTTON: AVERAGE RESULTS OF CLASSIFICATION, FIBER TESTS, AND GARDED YARN PROCESSING TESTS BY AREA, STAPLE AND STATE FOR AMERICAN UPLAND SAMPLES FROM SELEGTED GIN POINTS, GROPS OF 1980 AND 1981.

AREA, STATE AND CROP YEAR	NO. OF LOTS	CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK		PICKER & CARD WASTE	SPY NO.
		GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE			Rd	+b		
	NO.	INDEX	32ND IN.	IN.	PCT.	RDC.	MPSI	G/TEX	PGT.	PCT.	PCT.	UNITS	PGT.	NO.
SOUTHEAST														
MEDIUM STAPLE														
ALABAMA														
1980	21	89	34.4	1.07	44	46	90	23	6.0	3.2	72.1	9.4	7.0	49
1981	12	93	33.9	1.07	45	52	87	23	6.2	2.5	75.3	8.8	6.8	53
GEORGIA														
1980	8	85	32.5	1.01	44	45	94	23	5.3	3.6	70.9	10.0	8.2	35
1981	8	90	35.1	1.10	45	45	86	23	6.2	3.3	73.5	8.9	7.1	63
NORTH CAROLINA														
1980	3	83	34.7	1.08	44	43	94	25	5.6	4.2	72.1	8.7	7.8	57
1981	2	90	32.5	1.03	46	52	88	24	6.0	2.8	75.1	8.8	7.5	45
SOUTH CAROLINA														
1980	3	91	34.3	1.11	44	44	90	24	5.7	3.1	70.0	9.0	7.3	61
1981	2	94	35.5	1.11	44	47	82	24	6.3	3.0	77.9	8.5	6.8	70
LONG STAPLE														
GEORGIA														
1980	3	87	33.3	1.04	43	45	93	23	5.5	3.3	69.2	10.1	8.5	41
1981	2	92	35.0	1.12	45	47	84	23	5.9	3.7	75.7	9.3	7.9	59
NORTH GAROLINA														
1980	3	86	34.3	1.07	43	42	88	23	5.7	3.2	67.6	9.6	8.7	52
1981	2	94	35.5	1.13	45	45	83	23	6.2	2.9	76.3	8.6	7.1	71
SOUTH CAROLINA														
1980	3	88	33.3	1.06	43	42	90	23	5.6	4.0	68.9	8.9	9.2	46
1981	2	94	35.5	1.11	44	45	82	24	6.7	3.0	75.9	8.9	8.1	61

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER			
		STRENGTH		ELONGATION		APPEARANCE		NEPS		BLEACHED		DYED	
		COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE	Rd	+b	Rd	-b
	NO.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	PCT.	UNITS	PCT.	UNITS
SOUTHEAST													
MEDIUM STAPLE													
ALABAMA													
1980	21	99	32	6.1	4.8	99	65	70	320	91.1	4.9	27.1	32.8
1981	12	104	34	5.9	4.6	109	77	65	214	91.8	4.4	26.7	33.2
GEORGIA													
1980	8	86	27	5.3	4.6	92	66	81	290	89.5	5.6	27.3	32.1
1981	8	106	35	6.1	4.6	106	74	63	169	91.6	4.5	27.1	32.9
NORTH CAROLINA													
1980	3	110	37	6.3	5.0	87	67	80	361	91.2	4.8	28.1	32.1
1981	2	100	32	5.5	4.5	105	75	68	200	90.1	4.9	26.5	33.0
SOUTH CAROLINA													
1980	3	110	38	6.3	4.9	93	60	78	453	90.8	4.8	27.7	32.5
1981	2	110	40	6.6	5.4	80	60	103	345	92.2	4.6	26.7	33.2
LONG STAPLE													
GEORGIA													
1980	3	82	26	5.2	4.4	110	73	15	110	90.1	5.8	27.7	32.1
1981	2	100	33	5.6	4.1	125	90	18	112	91.4	4.7	26.4	33.3
NORTH CAROLINA													
1980	3	94	30	5.5	4.4	103	70	27	183	91.2	4.8	29.2	31.5
1981	2	111	39	6.3	5.1	110	80	26	167	92.1	4.6	26.1	33.7
SOUTH CAROLINA													
1980	3	92	30	5.4	4.2	103	70	35	243	90.2	4.6	28.7	31.7
1981	2	101	33	6.6	5.6	100	70	41	227	93.1	4.0	26.2	33.8

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	CLASSIFICATION		FIBER LENGTH		MICRO-NAIRE	FIBER STRENGTH		1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK		PICKER & CARD WASTE	SPY NO.
		GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE			Rd	+b		
	NO.	INDEX	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	UNITS	PCT.	NO.
SOUTH CENTRAL														
MEDIUM STAPLE														
ARKANSAS														
1980	29	87	34.7	1.09	43	47	93	23	5.6	3.6	70.9	8.8	7.3	49
1981	16	93	35.7	1.12	44	45	87	23	6.1	3.0	76.2	8.2	7.2	62
LOUISIANA														
1980	16	93	34.4	1.08	43	47	92	23	5.7	2.7	75.3	8.4	6.9	49
1981	10	88	34.6	1.08	44	46	90	24	5.4	3.4	74.1	8.5	7.6	61
MISSISSIPPI														
1980	32	88	35.1	1.10	43	46	92	23	5.5	3.6	72.0	8.4	7.5	50
1981	18	90	34.3	1.06	44	50	91	23	5.6	3.2	73.9	8.8	8.0	51
MISSOURI														
1980	6	94	35.2	1.09	43	49	94	23	5.6	3.1	74.4	9.1	6.7	50
1981	4	94	35.5	1.11	45	45	87	24	6.2	3.0	75.8	8.3	7.2	67
TENNESSEE														
1980	9	88	34.1	1.05	43	48	91	22	5.2	2.9	72.1	9.1	7.4	41
1981	10	93	34.8	1.08	45	44	84	23	6.4	3.0	76.9	8.3	6.8	60

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER			
		STRENGTH		ELONGATION		APPEARANCE		NEPS		BLEACHED		DYED	
		COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE	Rd	+b	Rd	-b
	NO.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	PCT.	UNITS	PCT.	UNITS
SOUTH CENTRAL													
MEDIUM STAPLE													
ARKANSAS													
1980	29	98	32	5.8	4.5	94	66	76	337	90.4	4.8	27.0	32.7
1981	16	107	37	6.3	4.9	93	68	83	343	91.7	4.2	27.6	32.6
LOUISIANA													
1980	16	98	33	5.9	4.9	93	64	77	371	91.3	4.5	26.6	33.1
1981	10	109	37	5.9	4.8	92	69	107	347	91.2	4.6	26.4	33.2
MISSISSIPPI													
1980	32	101	33	5.9	4.6	97	67	69	350	90.9	4.7	27.0	32.9
1981	18	101	33	5.6	4.3	100	71	72	287	91.1	4.4	26.5	33.3
MISSOURI													
1980	6	101	32	6.0	4.7	102	73	68	302	89.6	5.3	26.4	33.2
1981	4	110	39	6.5	5.3	103	70	85	234	91.4	4.3	26.9	33.0
TENNESSEE													
1980	9	91	29	5.4	4.3	99	68	53	266	91.0	5.0	26.7	32.9
1981	10	108	36	6.5	5.0	93	66	79	263	92.0	4.2	28.1	32.4

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK		PICKER & CARD WASTE	SPY NO.
		GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE			Rd	+b		
	NO.	INDEX	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	UNITS	PCT.	NO.
SOUTHWEST														
SHORT STAPLE														
CENTRAL TEXAS														
1980	21	93	29.5	0.95	44	43	92	20	5.5	3.4	73.5	10.0	7.3	35
1981	14	87	31.4	0.98	43	40	87	21	5.8	3.9	73.4	9.5	7.6	47
NORTHWEST TEXAS														
1980	74	86	31.5	0.97	44	41	86	22	6.4	4.9	72.4	9.6	8.0	47
1981	38	84	31.4	0.99	44	37	82	22	7.1	4.8	73.0	9.4	8.1	51
OKLAHOMA														
1980	9	94	31.3	0.97	43	42	90	22	6.1	4.6	74.5	9.6	7.9	42
1981	6	80	31.5	0.99	43	36	83	22	7.2	5.4	69.7	9.4	9.0	54
MEDIUM STAPLE														
SOUTH TEXAS														
1980	34	94	31.9	1.01	45	40	85	22	5.7	3.1	75.3	9.7	7.2	46
1981	32	87	34.2	1.09	44	42	83	23	5.8	3.9	74.2	8.9	8.1	66
CENTRAL TEXAS														
1980	6	95	34.3	1.08	45	46	88	23	6.0	2.4	75.9	9.0	6.2	52
1981	4	89	34.5	1.07	45	45	84	23	6.6	3.3	73.8	11.1	7.6	61
NORTHWEST TEXAS														
1980	24	88	32.2	1.02	44	39	86	23	6.6	4.6	75.0	9.1	8.3	48
1981	12	82	32.6	1.01	43	32	81	22	7.2	4.7	74.1	9.6	8.2	51

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER			
		STRENGTH		ELONGATION		APPEARANCE		NEPS		BLEACHED		DYED	
		COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE	Rd	+b	Rd	-b
	NO.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	PCT.	UNITS	PCT.	UNITS
SOUTHWEST													
SHORT STAPLE													
CENTRAL TEXAS													
1980	21	270	86	6.7	5.9	119	111	8	43	91.4	5.4	27.5	32.2
1981	14	289	94	7.1	6.3	115	111	5	26	91.4	5.1	27.9	32.2
NORTHWEST TEXAS													
1980	74	303	97	7.6	6.6	118	111	7	33	90.8	5.2	28.3	31.7
1981	38	293	94	7.9	7.0	107	103	12	37	91.3	4.8	28.3	31.9
OKLAHOMA													
1980	9	297	95	7.1	6.2	114	109	6	36	90.9	5.4	27.8	32.1
1981	6	300	96	7.8	6.9	97	92	14	48	90.9	5.2	29.2	31.2
MEDIUM STAPLE													
SOUTH TEXAS													
1980	34	97	31	5.9	4.7	96	70	52	215	91.7	4.8	27.9	32.2
1981	32	109	38	6.3	4.9	82	65	89	317	94.2	4.5	28.3	32.1
CENTRAL TEXAS													
1980	6	104	34	6.4	4.9	97	65	68	356	91.7	4.5	27.1	32.9
1981	4	105	36	6.4	5.0	88	63	95	334	91.6	4.7	27.4	32.6
NORTHWEST TEXAS													
1980	24	100	33	6.3	4.9	78	62	99	343	91.2	4.9	29.1	31.2
1981	12	94	30	6.6	5.0	98	64	33	147	91.1	4.4	29.0	31.3

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK		PICKER & CARD WASTE	SPY NO.
		GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE			Rd	+b		
	NO.	INDEX	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	UNITS	PCT.	NO.
WEST														
MEDIUM STAPLE														
ARIZONA														
1980	28	99	34.9	1.09	42	45	88	23	6.0	2.7	80.2	8.2	6.7	52
1981	15	97	34.5	1.08	43	47	89	23	6.0	2.6	79.0	8.2	6.9	48
CALIFORNIA														
1980	73	99	35.6	1.11	45	43	95	26	5.9	2.4	79.5	8.4	6.2	68
1981	22	97	35.6	1.11	45	43	97	26	5.8	2.6	78.7	8.4	6.3	71
WEST TEXAS														
1980	3	79	35.0	1.06	44	44	87	21	5.4	5.8	72.0	8.3	9.6	57
1981	2	97	35.0	1.07	45	39	84	23	6.9	2.4	79.4	8.7	7.0	57
LONG STAPLE														
NEW MEXICO														
1980	2	95	37.0	1.18	46	40	90	26	6.4	2.7	77.6	7.9	7.6	99
1981	2	96	37.5	1.19	46	38	91	26	6.3	2.6	78.6	8.8	7.5	80

TABLE 2.--CONTINUED

AREA, STATE AND CROP YEAR	NO. OF LOTS	YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER			
		STRENGTH		ELONGATION		APPEARANCE		NEPS		BLEACHED		DYED	
		COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE	Rd	+b	Rd	-b
	NO.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	PCT.	UNITS	PCT.	UNITS
WEST													
MEDIUM STAPLE													
ARIZONA													
1980	28	101	33	6.1	4.7	82	60	75	375	91.9	4.4	27.5	32.8
1981	15	98	32	5.7	4.4	101	70	40	179	92.1	3.7	27.0	33.2
CALIFORNIA													
1980	73	124	44	6.2	5.1	78	61	120	394	91.5	4.5	27.8	32.4
1981	22	123	44	6.0	4.7	95	72	104	255	91.2	4.3	27.9	32.4
WEST TEXAS													
1980	3	107	36	5.7	4.5	80	63	60	330	92.4	4.4	28.4	32.0
1981	2	106	36	6.4	4.8	100	60	37	180	93.8	4.3	28.1	32.8
LONG STAPLE													
NEW MEXICO													
1980	2	138	52	6.6	5.6	115	80	31	148	91.4	4.8	29.1	31.4
1981	2	133	48	6.3	5.1	95	70	19	120	91.9	4.6	28.1	32.5

TABLE 3.--COTTON: AVERAGE RESULTS OF FIBER AND CARDED YARN PROCESSING TESTS BY STAPLE GROUP, AREA, GRADE AND STAPLE FOR AMERICAN UPLAND SAMPLES FROM SELECTED GIN POINTS, CROP OF 1981.

STAPLE GROUP, AREA, GRADE AND STAPLE			NO. OF LOTS	FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK		PICKER & CARD WASTE	SPY NO.
				2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE			Rd	+b		
NAME	CODE	32ND IN.	NO.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	UNITS	PCT.	NO.
SHORT STAPLE														
SOUTHWEST														
SLM	41	32	3	1.00	43	43	86	22	6.7	3.1	73.9	9.0	6.2	49
SLM LT SP	42	31	10	0.98	44	37	84	22	6.8	4.0	73.8	9.2	7.1	50
		32	6	0.98	44	39	83	21	6.6	4.2	73.4	9.6	7.3	48
SLM SP	43	31	3	0.96	45	44	80	20	7.1	4.6	68.5	10.0	8.6	47
LM LT SP	52	31	9	0.98	43	36	85	22	6.2	5.0	72.4	9.3	8.7	49
		32	11	1.01	44	34	82	22	7.1	5.7	72.5	9.4	9.2	53
MEDIUM STAPLE														
SOUTHEAST														
SLM	41	33	3	1.02	45	54	86	22	6.0	2.4	75.8	9.4	7.0	43
		34	4	1.07	46	53	84	23	6.7	2.4	75.1	8.7	6.7	52
		36	3	1.12	44	47	83	23	6.0	2.9	76.2	8.0	6.8	60
SOUTH CENTRAL														
SLM	41	34	7	1.06	44	48	88	23	5.5	2.5	75.7	8.6	7.2	52
		35	12	1.09	45	48	88	23	5.9	2.7	76.6	8.4	7.0	60
		36	9	1.12	44	44	86	23	6.5	2.8	76.6	8.1	7.3	65
SLM LT SP	42	34	4	1.06	44	47	92	24	5.8	3.3	72.0	9.2	8.1	55
LM	51	34	5	1.07	44	49	91	24	5.4	3.6	73.5	8.8	8.6	54
		35	6	1.10	45	41	85	23	6.1	4.3	74.3	7.9	7.7	63

TABLE 3.--CONTINUED

STAPLE GROUP, AREA, GRADE AND STAPLE			NO. OF LOTS	YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER			
				STRENGTH		ELONGATION		APPEARANCE		NEPS		BLEACHED		DYED	
				COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	NO.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	PCT.	UNITS	PCT.	UNITS
SHORT STAPLE															
SOUTHWEST															
SLM	41	32	3	298	96	7.2	6.4	123	117	3	37	91.3	4.9	28.6	31.8
SLM LT SP	42	31	10	290	94	7.7	7.0	112	107	8	29	91.4	4.6	27.7	32.3
		32	6	277	94	7.4	6.5	110	110	8	30	91.5	4.8	28.0	32.1
SLM SP	43	31	3	277	87	7.4	6.6	110	100	10	44	89.9	5.4	28.2	31.5
LM LT SP	52	31	9	289	95	7.5	6.6	107	102	11	28	91.2	5.0	28.0	32.2
		32	11	303	96	8.1	7.2	104	100	11	38	91.6	5.0	29.0	31.5
MEDIUM STAPLE															
SOUTHEAST															
SLM	41	33	3	94	28	5.5	4.1	107	70	73	192	91.3	4.4	25.5	33.9
		34	4	102	34	6.0	4.5	113	73	61	216	92.0	4.4	26.5	33.3
		36	3	104	35	6.0	4.5	97	67	78	229	92.2	4.4	26.9	33.0
SOUTH CENTRAL															
SLM	41	34	7	102	34	5.7	4.4	89	67	97	307	91.1	4.5	27.3	32.8
		35	12	108	37	6.2	4.8	101	69	77	307	91.8	4.3	26.6	33.2
		36	9	108	38	6.4	5.1	93	67	91	313	92.0	4.1	27.8	32.5
SLM LT SP	42	34	4	102	33	5.5	4.2	95	68	56	286	91.0	4.5	27.3	32.7
LM	51	34	5	103	35	5.7	4.4	98	74	76	302	90.9	4.6	26.9	32.9
		35	6	107	37	6.4	5.1	92	70	74	295	91.6	4.1	27.9	32.4

TABLE 3.--CONTINUED

STAPLE GROUP, AREA, GRADE AND STAPLE			NO. OF LOTS	FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK		PICKER & CARD WASTE	SPY NO.
				2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE			Rd	+b		
NAME	CODE	32ND IN.	NO.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	UNITS	PCT.	NO.
MEDIUM STAPLE														
SOUTHWEST														
SLM	41	34	6	1.07	44	44	83	23	6.4	2.9	76.6	8.6	6.6	63
SLM LT SP	42	33	4	1.05	43	38	80	22	6.4	3.2	76.1	9.3	7.7	61
		34	6	1.08	43	41	82	24	6.5	3.2	75.2	10.2	7.8	62
		35	3	1.12	45	42	86	24	5.6	3.3	74.5	9.1	7.5	73
LM LT SP	52	33	3	1.03	42	32	77	21	7.5	6.5	72.1	9.4	9.4	54
		34	6	1.08	45	44	83	22	5.6	5.1	69.8	8.8	9.6	61
		35	5	1.12	44	38	84	23	6.0	4.3	73.4	9.0	8.7	72
WEST														
M	31	35	13	1.09	44	45	92	25	6.0	2.3	79.8	8.3	6.2	58
		36	6	1.13	46	41	95	26	5.9	2.3	80.0	8.5	6.1	75
SLM	41	34	4	1.06	42	47	91	23	5.8	3.2	77.5	8.5	7.1	45
		35	3	1.09	45	42	91	24	6.2	3.0	77.7	8.4	7.3	64
		36	7	1.12	46	43	97	26	5.8	2.7	77.7	8.3	6.4	75
LONG STAPLE														
SOUTHEAST														
SLM	41	35	3	1.12	44	44	82	23	6.0	3.4	75.3	8.7	7.5	61

TABLE 3.--CONTINUED

STAPLE GROUP, AREA, GRADE AND STAPLE			NO. OF LOTS	YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER			
				STRENGTH		ELONGATION		APPEARANCE		NEPS		BLEACHED		DYED	
				COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	NO.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	PCT.	UNITS	PCT.	UNITS
MEDIUM STAPLE															
SOUTHWEST															
SLM	41	34	6	111	36	6.5	5.0	98	70	83	255	94.8	4.3	26.9	33.2
SLM LT SP	42	33	4	102	34	6.5	4.9	83	63	56	295	92.1	4.0	29.2	31.5
		34	6	104	36	6.4	4.9	85	63	60	246	91.7	4.3	28.2	32.2
		35	3	118	42	6.4	5.1	73	63	93	324	91.6	5.0	29.2	31.4
LM LT SP	52	33	3	95	31	6.9	5.3	77	60	49	256	93.9	4.3	29.8	31.0
		34	6	104	36	5.8	4.7	77	60	113	396	92.2	4.2	28.2	32.2
		35	5	112	40	6.6	5.2	76	60	96	383	94.8	5.0	29.9	30.8
WEST															
M	31	35	13	110	37	5.9	4.5	100	72	45	174	92.1	4.0	27.3	33.0
		36	6	124	44	6.2	4.9	98	72	93	254	91.3	4.2	28.2	32.3
SLM	41	34	4	95	31	5.6	4.3	103	65	48	240	91.9	4.0	26.9	33.2
		35	3	115	41	6.1	4.8	83	67	231	359	92.1	4.2	27.8	32.5
		36	7	124	45	6.0	4.8	97	73	94	288	91.6	4.6	27.6	32.4
LONG STAPLE															
SOUTHEAST															
SLM	41	35	3	103	34	5.7	4.5	113	83	33	166	91.8	4.6	26.4	33.4

TABLE 4.--COTTON: AVERAGE OF CLASSIFICATION, FIBER TESTS, AND YARN PROCESSING TESTS BY STAPLE GROUP, VARIETY AND STATE FOR SAMPLES FROM SELECTED 100 PERCENT ONE VARIETY GIN POINTS, CROP OF 1981.

STAPLE CROUP, VARIETY, AND STATE	NO. OF LOTS	CLASSIFICATION		FIBER LENCTH		MICRO-NAIRE	FIBER STRENCTH		1/8" ELON-CATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK		PICKER & CARD WASTE	SPY NO.
		CRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE			Rd	+b		
	NO.	INDEX	32ND IN.	IN.	PCT.	RDC.	MPSI	G/TEX	PCT.	PCT.	PCT.	UNITS	PCT.	NO.
SHORT STAPLE														
GP 3755 CENTRAL TEXAS	2	80	31.0	0.97	42	34	86	21	5.2	4.7	71.9	10.2	8.9	45
CP 3774 CENTRAL TEXAS	2	80	31.0	0.97	43	39	87	22	6.0	4.7	73.0	9.7	8.1	50
WESTBURN M OKLAHOMA	2	75	31.5	1.00	42	33	84	23	7.3	6.1	68.4	9.5	9.6	53
MEDIUM STAPLE														
ACALA SJ-2 CALIFORNIA	8	97	35.6	1.12	46	42	97	27	5.9	2.7	79.2	8.5	6.6	75
ACALA SJ-5 CALIFORNIA	2	97	36.0	1.13	46	42	99	27	5.8	2.3	80.2	8.6	5.9	86
COKER 304 SOUTH TEXAS	1	89	35.0	1.15	44	43	83	24	5.0	3.2	75.8	9.3	7.1	76
COKER 312 NORTHWEST TEXAS	2	86	33.0	1.01	42	33	81	22	6.9	3.3	73.3	10.3	7.1	48
DELTAPINE 41														
ARIZONA	1	94	34.0	1.09	43	49	94	24	6.1	3.5	77.0	8.6	7.3	57
ARKANSAS	2	85	35.5	1.13	45	40	87	23	5.9	3.9	73.1	7.6	6.9	66
MISSISSIPPI	2	89	34.0	1.07	43	48	95	24	5.8	3.4	73.0	9.4	7.9	55
DELTAPINE 55 TENNESSEE	2	90	35.0	1.11	45	43	84	22	6.0	4.3	77.3	8.1	7.5	62
DELTAPINE 61														
ALABAMA	2	94	34.5	1.12	45	51	85	24	7.2	2.5	75.9	8.6	6.2	64
ARKANSAS	2	94	36.0	1.15	45	44	82	25	8.0	2.6	75.4	8.2	6.8	74
CALIFORNIA	2	100	35.0	1.08	44	45	90	24	6.0	2.8	79.6	7.8	6.4	55
MISSISSIPPI	2	94	35.0	1.09	45	48	87	25	6.8	2.5	75.3	8.5	6.9	60

TABLE 4.--CONTINUED

STAPLE GROUP, VARIETY, AND STATE	NO. OF LOTS	YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER			
		STRENGTH		ELONGATION		APPEARANCE		NEPS		BLEACHED		DYED	
		COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE	Rd	+b	Rd	-b
	NO.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	PCT.	UNITS	PCT.	UNITS
SHORT STAPLE													
GP 3755													
CENTRAL TEXAS	2	281	90	7.3	6.1	110	100	9	31	91.0	5.0	27.7	33.0
GP 3774													
CENTRAL TEXAS	2	289	98	6.9	6.5	110	105	4	23	91.9	5.4	28.6	31.4
WESTBURN M													
OKLAHOMA	2	304	97	7.8	6.8	90	85	20	69	91.3	5.0	29.9	30.8
MEDIUM STAPLE													
ACALA SJ-2													
CALIFORNIA	8	127	45	6.1	4.8	99	74	81	205	91.1	4.2	27.9	32.4
ACALA SJ-5													
CALIFORNIA	2	135	50	6.5	5.4	90	75	120	278	92.3	4.4	27.3	32.9
COKER 304													
SOUTH TEXAS	1	123	45	7.0	5.8	70	60	140	398	92.5	4.5	30.2	30.8
COKER 312													
NORTHWEST TEXAS	2	93	29	6.5	4.8	105	65	59	216	90.6	4.1	28.0	31.9
DELTAPINE 41													
ARIZONA	1	107	36	6.2	4.5	110	60	60	268	92.6	4.3	26.2	33.7
ARKANSAS	2	113	40	6.6	4.9	100	70	57	200	92.2	4.1	29.5	31.3
MISSISSIPPI	2	102	33	5.4	4.2	80	60	48	337	91.0	4.5	27.1	32.8
DELTAPINE 55													
TENNESSEE	2	108	37	6.7	5.1	110	70	50	167	90.8	4.4	29.1	31.7
DELTAPINE 61													
ALABAMA	2	112	40	6.5	5.0	105	85	51	262	93.1	4.1	25.6	34.1
ARKANSAS	2	114	40	6.8	5.4	95	65	115	387	91.7	4.2	27.8	32.6
CALIFORNIA	2	105	35	5.9	4.3	85	70	30	160	91.1	3.6	27.9	32.8
MISSISSIPPI	2	115	40	6.5	5.1	100	70	59	207	92.5	4.4	26.0	33.6

TABLE 4.--CONTINUED

STAPLE GROUP, VARIETY, AND STATE	NO. OF LOTS	CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK		PICKER & CARD WASTE	SPY NO.
		GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE			Rd	+b		
	NO.	INDEX	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	UNITS	PCT.	NO.
MEDIUM STAPLE														
DIXIE KING III														
GEORGIA	2	92	33.5	1.05	46	47	82	22	6.7	3.5	73.7	9.3	7.4	55
PAYMASTER 145														
SOUTH TEXAS	1	90	33.0	1.03	45	43	80	22	5.6	3.2	76.7	8.7	8.4	53
PAYMASTER 404														
NORTHWEST TEXAS	2	70	32.0	0.99	44	32	78	21	7.8	6.6	72.4	9.6	10.2	48
STONEVILLE 213														
MISSISSIPPI	2	92	34.5	1.07	44	50	90	24	5.8	2.7	75.4	9.0	7.5	52
SOUTH TEXAS	3	91	34.0	1.07	43	43	81	23	6.3	3.0	74.8	8.5	7.8	60
TENNESSEE	2	94	34.5	1.07	46	46	82	22	7.3	2.5	76.6	8.9	6.9	62
STONEVILLE 506														
ARKANSAS	2	94	35.5	1.12	44	46	89	24	6.3	2.7	76.2	8.5	7.1	66
MISSISSIPPI	2	85	34.0	1.07	44	51	90	23	5.6	4.0	72.9	8.8	9.3	50
STONEVILLE 825														
ARIZONA	2	94	33.5	1.05	42	46	93	21	5.0	2.9	77.8	8.3	7.5	33
ARKANSAS	4	94	35.3	1.10	44	50	91	23	5.0	3.0	77.3	8.3	7.7	56
LOUISIANA	2	88	34.5	1.11	44	47	88	24	5.0	3.9	74.9	7.6	7.4	61
MISSISSIPPI	4	92	34.8	1.07	44	51	93	23	4.7	3.3	75.3	8.5	8.2	45
SOUTH TEXAS	3	89	35.0	1.12	44	43	87	24	5.2	3.2	74.8	9.1	7.7	73
TAMCOT CAMD E														
SOUTH TEXAS	1	97	35.0	1.13	45	46	87	23	4.8	2.3	79.7	8.8	6.9	65
TPSA 1633														
SOUTH TEXAS	1	80	35.0	1.13	44	42	83	22	5.7	4.4	73.7	9.4	8.3	80
TPSA 9070														
SOUTH TEXAS	1	89	34.0	1.09	42	43	86	23	6.1	3.9	75.3	8.8	8.8	59
VAIL 7														
ARKANSAS	2	97	36.0	1.11	43	42	88	23	6.1	2.5	78.5	8.5	7.4	59
LONG STAPLE														
COKER 310														
GEORGIA	2	92	35.0	1.12	45	47	84	23	5.9	3.7	75.7	9.3	7.9	59

TABLE 4.--CONTINUED

STAPLE GROUP, VARIETY, AND STATE	NO. OF LOTS	YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER			
		STRENGTH		ELONGATION		APPEARANCE		NEPS		BLEACHED		DYED	
		COARSE	FINE	COARSE	FINE	COARSE	FINE	COARSE	FINE	Rd	+b	Rd	-b
	NO.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	PCT.	UNITS	PCT.	UNITS
MEDIUM STAPLE													
DIXIE KING 111													
GEORGIA	2	99	34	6.0	4.7	100	65	66	189	91.7	4.6	25.9	33.6
PAYMASTER 145													
SOUTH TEXAS	1	105	35	5.9	4.6	80	70	54	192	94.4	4.8	26.5	33.1
PAYMASTER 404													
NORTHWEST TEXAS	2	89	29	6.7	5.4	100	60	43	100	92.2	4.7	30.3	30.7
STONEVILLE 213													
MISSISSIPPI	2	103	35	5.8	4.5	95	75	62	348	91.2	4.4	23.2	35.4
SOUTH TEXAS	3	102	35	6.7	4.8	83	63	99	365	93.2	4.4	27.4	32.6
TENNESSEE	2	105	36	6.6	5.2	90	70	107	405	93.0	4.4	26.8	33.3
STONEVILLE 506													
ARKANSAS	2	111	38	6.3	5.1	110	80	55	230	91.9	4.0	27.5	32.9
MISSISSIPPI	2	101	33	5.7	4.2	110	85	87	268	90.5	4.8	27.0	32.9
STONEVILLE 825													
ARIZONA	2	79	23	4.7	4.0	95	75	33	140	91.1	3.7	26.3	33.5
ARKANSAS	4	103	35	5.7	4.5	80	65	90	434	91.6	4.0	27.1	33.1
LOUISIANA	2	108	37	5.8	4.8	95	70	156	454	91.6	4.1	26.0	33.5
MISSISSIPPI	4	97	32	5.4	4.1	108	68	88	254	91.4	4.0	26.6	33.3
SOUTH TEXAS	3	116	42	6.2	4.9	80	70	96	318	96.3	4.8	27.6	32.1
TAMCOT CAMD E													
SOUTH TEXAS	1	112	39	6.1	4.7	110	80	44	172	98.2	4.8	28.6	31.7
TPSA 1633													
SOUTH TEXAS	1	117	41	6.6	4.9	70	60	174	328	91.6	4.5	29.1	31.3
TPSA 9070													
SOUTH TEXAS	1	106	37	6.2	5.0	80	70	61	151	89.3	4.4	28.4	32.3
VAIL 7													
ARKANSAS	2	101	35	6.7	5.0	75	60	149	502	91.0	4.7	28.9	31.7
LONG STAPLE													
COKER 310													
GEORGIA	2	100	33	5.6	4.1	125	90	18	112	91.4	4.7	26.4	33.3

TABLE 5.--COTTON: AMERICAN UPLAND SHORT STAPLE FIBER AND YARN QUALITY CHARACTERISTICS BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1981.

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH			FIBER STRENGTH			SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.	MICRONAIRE	ZERO GAGE	1/8" GAGE	1/8" ELONGATION	VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
CENTRAL TEXAS														
AQUILLA		GP 3774					100 PERCENT							
LM LT SP	52	31	0.98	43	37	87	21	6.4	3.4	4.5	71.0	9.3	42-1	8.4
LM LT SP	52	31	0.95	42	41	87	22	5.5	3.6	4.9	75.0	10.1	22-2	7.8
BYERS		LANKART 611					90 PERCENT							
SLM	41	32	1.03	41	39	82	22	6.9	1.8	3.6	71.7	9.1	41-3	7.0
SLM LT SP	42	31	0.98	43	41	83	21	6.6	1.5	2.6	71.0	8.7	41-4	7.6
COMMERCE		LANKART 57					99 PERCENT							
M	31	31	0.93	45	43	91	20	5.8	1.5	1.9	76.0	9.8	21-4	6.4
M	31	31	0.94	45	49	92	22	5.8	1.2	2.5	77.3	9.8	21-3	5.8
COVINGTON		LANKART LX 571					97 PERCENT							
SLM	41	32	0.98	44	49	88	22	6.0	2.1	2.9	73.3	9.6	32-2	5.7
SLM LT SP	42	32	0.94	43	42	90	22	5.3	2.9	3.9	72.0	10.2	32-2	7.0
FERRIS		TAMCOT SP-37					98 PERCENT							
LM LT SP	52	31	0.98	43	35	88	22	5.5	4.8	5.9	72.5	9.6	32-2	9.7
LM	51	32	1.02	45	37	90	22	5.9	3.0	4.5	74.5	8.8	31-4	7.3
MOODY		LANKART 57					80 PERCENT							
SLM LT SP	42	32	0.99	44	43	84	21	5.2	3.4	4.3	74.3	10.2	32-1	8.6
LM LT SP	52	31	1.00	46	40	87	21	5.8	2.7	3.7	75.5	8.0	31-3	7.3
WHITNEY		GP 3755					100 PERCENT							
LM LT SP	52	31	0.96	42	37	85	21	5.1	3.6	4.7	70.0	10.0	42-1	8.9
LM LT SP	52	31	0.97	41	31	87	21	5.3	3.5	4.6	73.7	10.4	32-1	8.9

TABLE 5.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES									COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE		STAPLE	8s	22s	8s	22s	8s	22s	8s	22s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
CENTRAL TEXAS																	
AQUILLA			GP 3774						100 PERCENT								
LM LT SP	52	31	293	97	7.2	6.8	110	110	6	20	52	72.8	10.6	92.9	5.2	28.3	31.6
LM LT SP	52	31	284	98	6.6	6.2	110	100	2	26	47	75.7	10.5	90.9	5.6	28.9	31.2
BYERS			LANKART 611						90 PERCENT								
SLM	41	32	289	91	7.3	6.5	120	110	0	42	49	77.3	9.7	91.5	4.7	29.3	31.5
SLM LT SP	42	31	274	87	7.2	6.8	100	100	18	48	44	76.8	10.1	89.9	4.6	28.2	31.8
COMMERCE			LANKART 57						99 PERCENT								
M	31	31	291	94	7.4	6.1	120	120	0	18	42	80.5	10.5	90.5	5.3	26.0	33.1
M	31	31	304	98	7.1	6.6	120	120	4	10	50	81.2	10.8	91.8	5.2	27.5	32.4
COVINGTON			LANKART LX 571						97 PERCENT								
SLM	41	32	307	102	6.4	6.0	130	120	0	20	49	75.7	10.5	91.0	5.4	27.4	32.4
SLM LT SP	42	32	297	94	7.0	5.9	120	120	2	34	45	78.7	10.9	91.1	5.4	26.5	33.0
FERRIS			TAMCOT SP-37						98 PERCENT								
LM LT SP	52	31	285	95	7.3	6.3	110	120	6	12	46	74.6	10.7	91.5	4.3	28.1	32.5
LM	51	32	295	99	7.4	6.4	120	110	0	24	50	82.1	10.2	92.0	5.1	28.9	31.3
MOODY			LANKART 57						80 PERCENT								
SLM LT SP	42	32	286	92	7.1	6.4	110	110	12	34	45	75.6	10.6	92.7	4.8	28.7	32.0
LM LT SP	52	31	286	92	7.3	6.3	120	120	2	18	43	80.5	10.8	91.3	5.4	27.1	32.7
WHITNEY			GP 3755						100 PERCENT								
LM LT SP	52	31	288	95	7.6	6.5	110	120	10	14	49	72.5	10.4	91.0	4.9	28.4	32.2
LM LT SP	52	31	273	85	7.0	5.7	110	80	8	48	41	74.9	10.7	90.9	5.1	27.0	33.7

TABLE 5.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH			FIBER STRENGTH			SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.	MICRONAIRE	ZERO GAGE	1/8" GAGE	1/8" ELONGATION	VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	WASTE
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
NORTHWEST TEXAS														
BIG LAKE			TAMCOT SP-21				71 PERCENT							
SLM LT SP	42	33	0.98	45	40	84	21	7.0	1.6	2.9	73.7	9.4	31-4	5.8 [1]
SLM	41	32	1.00	43	41	88	23	7.1	1.7	2.8	76.8	8.4	31-1	5.8 [1]
BULA			TAMCOT SP-21				90 PERCENT							
SLM LT SP	42 [2]	32	0.99	45	32	80	21	6.8	2.9	4.6	74.0	9.2	31-4	6.6
LM LT SP	52 [2]	32	0.98	43	30	80	21	7.8	3.5	5.1	75.5	9.0	31-3	7.5
COLORADO CITY			TAMCOT SP-37				75 PERCENT							
LM LT SP	52	32	1.01	43	38	79	22	6.9	4.5	6.0	73.5	9.3	31-4	9.3 [1]
SLM LT SP	42	31	0.99	43	38	84	22	7.3	4.1	3.6	77.0	8.9	31-3	7.3 [1]
DIMMITT			PAYMASTER 202				88 PERCENT							
LM LT SP	52 [2]	33	1.05	44	26	79	23	8.1	3.6	5.6	71.3	10.5	33-2	8.1 [1]
BG	82 [3]	33	1.02	44	34	80	23	8.6	6.3	8.0	69.7	9.5	42-1	10.9
DODSON			TAMCOT SP-21				75 PERCENT							
LM LT SP	52	31	0.99	44	31	80	23	7.0	4.0	5.3	72.5	9.1	41-3	8.3
LM LT SP	52	31	0.96	44	37	79	21	7.4	3.1	5.3	72.5	9.0	41-3	8.9
EARTH			GSA-71				85 PERCENT							
LM LT SP	52 [2]	32	1.01	42	30	78	21	7.9	4.2	5.9	73.7	9.9	32-1	10.2
LM LT SP	52 [2]	32	1.00	42	27	76	21	7.8	2.9	4.2	69.0	10.6	43-1	12.2 [1]
FLUVANNA			WESTERN 44				95 PERCENT							
SLM LT SP	42	30	0.95	44	42	82	20	5.9	2.6	4.0	74.0	8.9	31-4	7.5 [1]
LM LT SP	52	30	0.94	45	45	85	21	6.8	3.3	4.6	73.3	8.8	41-3	7.6 [1]
GOODLAND			STRIPPER 31				80 PERCENT							
LM LT SP	52	32	1.00	44	35	81	23	7.9	3.6	5.4	74.3	9.2	31-4	9.5
BG	82 [3]	32	0.98	46	32	79	24	8.5	6.9	8.1	71.3	9.2	42-1	12.7

[1] COTTON STUCK TO PROCESSING ROLLS.
[2] REDUCED FROM 42 BECAUSE OF BARK.
[3] REDUCED FROM 52 BECAUSE OF BARK.

TABLE 5.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE		STAPLE	8s	22s	8s	22s	8s	22s	8s	22s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
NORTHWEST TEXAS																	
BIG LAKE			TAMCOT SP-21					71 PERCENT									
SLM LT SP	42	33	314	105	6.6	5.4	100	120	4	26	53	78.6	10.3	90.4	5.6	29.2	31.1
SLM	41	32	299	95	8.0	6.7	120	120	8	48	49	81.4	9.3	91.4	4.7	29.1	31.6
BULA			TAMCOT SP-21					90 PERCENT									
SLM LT SP	42	32	211	92	7.9	7.0	110	100	6	26	49	81.0	10.1	90.6	3.9	28.0	31.5
LM LT SP	52[1]	32	304	96	8.4	7.6	100	90	4	40	56	80.0	10.6	92.7	4.3	28.8	31.5
COLORADO CITY			TAMCOT SP-37					75 PERCENT									
LM LT SP	52	32	277	92	7.5	6.7	120	110	6	38	48	80.2	10.0	92.3	4.7	26.3	33.4
SLM LT SP	42	31	301	99	8.0	7.4	120	110	8	22	58	82.2	9.9	91.2	4.2	27.8	32.8
DIMMITT			PAYMASTER 202					88 PERCENT									
LM LT SP	52[1]	33	306	97	8.8	7.8	110	100	8	36	58	79.3	11.1	90.7	4.0	26.9	32.1
BG	82[2]	33	325	99	9.1	8.3	90	90	18	58	54	77.6	10.7	92.6	5.2	29.4	31.1
DODSON			TAMCOT SP-21					75 PERCENT									
LM LT SP	52	31	289	97	8.2	7.4	110	110	16	22	54	80.7	10.0	91.1	4.7	29.6	31.2
LM LT SP	52	31	313	98	8.0	7.1	90	80	38	58	57	79.1	10.1	90.8	5.2	28.5	31.8
EARTH			GSA-71					85 PERCENT									
LM LT SP	52[1]	32	295	88	8.7	7.5	100	100	2	62	49	78.4	11.3	90.5	5.7	31.0	30.3
LM LT SP	52[1]	32	296	91	8.9	8.0	70	60	50	70	50	76.6	11.6	92.9	5.3	28.8	31.5
FLUVANNA			WESTERN 44					95 PERCENT									
SLM LT SP	42	30	278	89	7.9	6.7	120	110	2	16	50	79.6	10.2	91.8	4.7	27.5	32.6
LM LT SP	52	30	286	95	7.6	6.7	110	110	6	18	50	79.6	10.1	89.8	4.3	27.2	32.6
GOODLAND			STRIPPER 31					80 PERCENT									
LM LT SP	52	32	311	99	8.1	7.5	110	120	6	44	50	80.0	10.7	92.2	4.5	29.7	31.2
BG	82[2]	32	322	100	8.8	7.8	80	60	52	162	54	78.0	10.8	90.5	5.5	30.7	30.5

[1] REDUCED FROM 42 BECAUSE OF BARK.
[2] REDUCED FROM 52 BECAUSE OF BARK.

TABLE 5.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
NORTHWEST TEXAS														
HALE CENTER			GSA-71				80 PERCENT							
SLM LT SP	42	31	0.97	44	30	78	22	6.8	2.5	4.0	74.5	8.7	31-4	7.4
LM LT SP	52 [1]	32	1.00	43	30	76	20	7.9	4.0	5.7	73.7	9.7	32-2	9.4
HAMLIN			LANKART 611				75 PERCENT							
SLM LT SP	42	31	0.96	46	41	82	21	7.2	2.4	3.5	74.2	9.5	31-3	6.7
M LT SP	32	31	0.97	45	45	82	21	7.8	1.3	2.6	75.7	9.2	31-3	6.3
HEDLEY			LANKART LX 571				80 PERCENT							
SLM LT SP	42 [2]	31	1.01	44	34	86	22	6.6	2.4	3.9	74.0	10.0	32-1	7.7
SLM SP	43 [2]	30	0.97	45	33	79	21	7.1	4.6	6.4	71.5	10.2	32-2	8.6
HOBBS			TAMCOT SP-21				75 PERCENT							
LM LT SP	52	32	1.01	46	40	81	21	6.2	4.7	6.3	70.3	9.2	42-1	9.1
SLM LT SP	42	32	0.98	45	38	77	19	9.0	3.3	4.9	73.3	9.1	31-4	7.8 [3]
NEW DEAL			STRIPPER 32				80 PERCENT							
LM LT SP	52	32	1.03	44	32	86	24	7.0	4.4	5.8	72.3	9.4	32-2	8.1 [3]
LM LT SP	52	32	1.02	43	34	84	22	6.7	4.2	6.1	72.3	8.7	41-3	8.1
NEW HOME			GSA-71				70 PERCENT							
SLM LT SP	42	30	0.96	46	35	77	21	7.5	1.8	2.9	75.7	9.2	31-3	6.4
SLM LT SP	42	31	0.97	44	37	81	20	6.8	2.6	4.6	72.3	8.9	41-3	7.3
PADUCAH			LANKART 611				90 PERCENT							
SLM LT SP	42	31	0.98	45	36	81	21	7.9	3.4	4.7	73.7	.9.6	32-2	7.0
LM SP	53 [4]	30	0.97	44	33	81	21	6.9	4.4	6.4	68.5	10.4	43-1	10.7

[1] REDUCED FROM 42 BECAUSE OF BARK.
[2] REDUCED FROM 33 BECAUSE OF BARK.
[3] COTTON STUCK TO PROCESSING ROLLS.
[4] REDUCED FROM 43 BECAUSE OF BARK.

TABLE 5.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE	STAPLE		8s	22s	8s	22s	8s	22s	8s	22s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
NORTHWEST TEXAS																	
HALE CENTER			GSA-71						80 PERCENT								
SLM LT SP	42	31	300	95	8.6	7.5	110	100	2	30	51	80.7	9.8	91.4	4.9	29.2	31.7
LM LT SP	52[1]	32	293	91	8.2	7.8	80	70	8	24	51	79.5	10.6	91.2	5.0	29.5	31.1
HAMLIN			LANKART 611						75 PERCENT								
SLM LT SP	42	31	280	90	7.8	7.0	120	110	4	26	49	79.2	10.2	91.6	4.8	26.0	33.5
M LT SP	32	31	301	95	7.9	7.0	120	110	6	12	50	80.5	10.1	92.4	4.9	27.9	32.4
HEDLEY			LANKART LX 571						80 PERCENT								
SLM LT SP	42	31	291	93	7.7	6.8	110	110	4	22	45	80.2	10.3	91.5	3.6	27.3	32.2
SLM SP	43[2]	30	303	89	8.1	7.8	90	80	40	40	51	77.1	11.5	91.9	5.6	29.8	30.6
HOBBS			TAMCOT SP-21						75 PERCENT								
LM LT SP	52	32	300	97	8.1	6.8	120	110	14	38	57	79.6	10.1	92.3	4.5	27.2	32.9
SLM LT SP	42	32	283	94	7.8	7.1	100	120	20	30	52	81.5	10.1	92.1	4.6	29.7	31.2
NEW DEAL			STRIPPER 32						80 PERCENT								
LM LT SP	52	32	323	103	7.9	7.1	120	120	0	24	57	79.2	10.4	91.0	5.5	30.1	30.7
LM LT SP	52	32	309	96	8.2	7.4	110	110	4	20	53	79.1	9.8	90.6	4.5	30.4	30.9
NEW HOME			GSA-71						70 PERCENT								
SLM LT SP	42	30	275	89	7.5	7.1	120	110	4	16	42	81.1	10.1	91.5	3.6	25.1	34.6
SLM LT SP	42	31	279	90	8.0	7.0	120	120	4	20	46	80.0	10.2	91.0	4.9	28.5	31.7
PADUCAH			LANKART 611						90 PERCENT								
SLM LT SP	42	31	285	90	7.4	6.8	120	120	10	32	53	80.1	10.7	92.3	3.8	26.5	32.9
LM SP	53[3]	30	297	95	7.9	7.0	90	80	38	80	54	74.8	11.6	90.7	5.3	30.1	30.4

[1] REDUCED FROM 42 BECAUSE OF BARK.
[2] REDUCED FROM 33 BECAUSE OF BARK.
[3] REDUCED FROM 43 BECAUSE OF BARK.

TABLE 5.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
NORTHWEST TEXAS														
SNYDER			WESTERN 44				70 PERCENT							
SLM LT SP	42	31	0.97	44	40	83	21	6.1	2.6	3.9	74.5	9.5	31-3	6.3
SLM LT SP	42	31	0.99	43	38	87	22	6.0	2.6	4.2	73.7	9.4	31-4	6.0
THROCKMORTON			LANKART 57				85 PERCENT							
SLM SP	43	31	0.96	46	48	80	19	6.9	2.7	4.4	68.3	10.1	43-1	8.1
SLM SP	43	31	0.96	45	48	81	20	6.9	3.5	5.1	68.2	10.0	42-2	8.5
VERNON			LOCKETT 77				99 PERCENT							
LM LT SP	52	32	1.00	45	37	94	23	5.6	4.8	6.3	73.0	8.6	41-3	9.8[1]
SLM LT SP	42	31	0.98	43	39	90	23	6.2	3.1	4.5	73.3	9.0	31-4	8.1
WEINERT			LANKART LX 571				80 PERCENT							
SLM LT SP	42	32	1.00	45	40	87	23	6.7	2.2	3.4	73.7	9.1	31-4	6.3
M LT SP	32	31	0.94	44	43	86	20	7.0	1.1	2.2	74.3	9.5	31-3	6.1
OKLAHOMA														
DAVIDSON			LANKART 57				98 PERCENT							
SLM LT SP	42	32	0.98	44	37	80	20	6.8	2.6	4.2	73.2	9.6	32-2	7.6
LM LT SP	52[2]	31	0.99	43	36	84	23	7.5	4.1	5.7	69.3	8.6	41-4	9.8
GREENFIELD			WESTBURN M				100 PERCENT[3]							
LM SP	53[4]	32	1.03	41	33	85	24	7.2	4.3	6.1	69.3	8.8	41-4	9.5
LM SP	53[4]	31	0.97	43	32	83	22	7.4	4.4	6.1	67.5	10.2	43-2	9.7
LONE WOLF			LANKART 57				98 PERCENT							
LM LT SP	52	32	1.00	45	39	86	24	6.8	4.4	5.9	69.8	9.3	42-2	8.5
SLM SP	43	31	0.95	43	37	79	21	7.6	2.4	4.2	69.0	9.8	42-1	9.1

[1] COTTON STUCK TO PROCESSING ROLLS.
[2] REDUCED FROM 42 BECAUSE OF BARK.
[3] 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.
[4] REDUCED FROM 43 BECAUSE OF BARK.

TABLE 5.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES									COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE	:	STAPLE	8s	22s	8s	22s	8s	22s	8s	22s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
NORTHWEST TEXAS																	
SNYDER			WESTERN 44					70 PERCENT									
SLM LT SP	42	31	290	94	7.7	6.9	110	110	10	22	50	79.3	10.6	91.5	5.1	26.9	32.8
SLM LT SP	42	31	288	93	6.9	6.8	120	110	4	18	50	79.3	10.5	90.7	4.9	27.2	31.9
THROCKMORTON			LANKART 57					85 PERCENT									
SLM SP	43	31	272	85	7.0	6.0	120	110	2	26	43	74.2	10.8	88.9	5.4	26.1	32.3
SLM SP	43	31	260	82	7.3	6.3	120	110	4	30	42	74.6	10.8	89.9	5.3	28.3	32.0
VERNON			LOCKETT 77					99 PERCENT									
LM LT SP	52	32	314	102	7.2	6.2	100	100	14	40	51	80.1	10.0	91.6	4.7	27.5	31.9
SLM LT SP	42	31	309	106	7.7	7.0	90	80	14	48	56	78.8	10.3	92.6	4.9	29.2	31.3
WEINERT			LANKART LX 571					80 PERCENT									
SLM LT SP	42	32	295	98	7.3	6.3	110	100	4	38	48	78.8	10.3	91.4	5.4	26.0	33.3
M LT SP	32	31	277	90	7.3	6.5	110	120	6	34	42	79.5	10.2	91.0	4.7	28.6	31.7
OKLAHOMA																	
DAVIDSON			LANKART 57					98 PERCENT									
SLM LT SP	42	32	288	91	7.2	6.5	110	110	4	20	47	78.5	10.4	91.0	4.8	29.1	31.8
LM LT SP	52[1]	31	293	96	8.1	7.0	90	80	8	38	54	78.1	9.5	90.7	4.8	26.1	33.1
GREENFIELD			WESTBURN M					100 PERCENT[2]									
LM SP	53[3]	32	312	101	8.1	7.0	70	70	34	116	50	76.0	10.6	91.9	4.8	31.2	30.0
LM SP	53[3]	31	295	92	7.4	6.5	110	100	6	22	55	73.5	12.1	90.7	5.1	28.5	31.6
LONE WOLF			LANKART 57					98 PERCENT									
LM LT SP	52	32	315	104	7.7	7.0	110	110	10	16	64	76.4	10.2	90.2	5.8	30.1	30.7
SLM SP	43	31	299	93	8.0	7.6	90	80	24	76	55	75.8	11.2	91.0	5.6	30.3	30.2

[1] REDUCED FROM 42 BECAUSE OF BARK.
[2] 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.
[3] REDUCED FROM 43 BECAUSE OF BARK.

TABLE 5A.-COTTON: AMERICAN UPLAND SHORT STAPLE QUALITY CHARACTERISTICS OF YARN SPUN ON AN OPEN-END FRAME, BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1981.

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES			
			STRENGTH	ELONGATION	APPEARANCE	NEPS
GRADE	:	STAPLE	8s	8s	8s	8s
NAME	CODE	32ND IN.	LBS.	PCT.	INDEX	NO.
CENTRAL TEXAS						
AQUILLA		GP 3774			100 PERCENT	
LM LT SP	52	31	249	6.8	110	2
LM LT SP	52	31	235	6.9	120	0
BYERS		LANKART 611			90 PERCENT	
SLM	41	32	237	6.3	110	0
SLM LT SP	42	31	228	7.2	110	2
COMMERCE		LANKART 57			99 PERCENT	
M	31	31	236	7.0	120	0
M	31	31	246	7.0	120	0
COVINGTON		LANKART LX 571			97 PERCENT	
SLM	41	32	247	7.0	120	0
SLM LT SP	42	32	235	7.2	120	2
FERRIS		TAMCOT SP-37			98 PERCENT	
LM LT SP	52	31	248	7.0	100	0
LM	51	32	259	7.1	120	0
MOODY		LANKART 57			80 PERCENT	
SLM LT SP	42	32	239	6.7	110	0
LM LT SP	52	31	239	6.8	130	0
WHITNEY		GP 3755			100 PERCENT	
LM LT SP	52	31	246	6.8	120	0
LM LT SP	52	31	248	6.8	120	0

TABLE 5A. - CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES			
			STRENGTH	ELONGATION	APPEARANCE	NEPS
GRADE	:	STAPLE	8s	8s	8s	8s
NAME	CODE	32ND IN.	LBS.	PCT.	INDEX	NO.
NORTHWEST TEXAS						
BIG LAKE			TAMCOT SP-21		71 PERCENT	
SLM LT SP	42	33	254	7.4	130	0
SLM	41	32	253	7.6	110	2
BULA			TAMCOT SP-21		90 PERCENT	
SLM LT SP	42	32	247	7.8	111	0
LM LT SP	52 1/	32	252	8.2	120	4
COLORADO CITY			TAMCOT SP-37		75 PERCENT	
LM LT SP	52	32	232	7.0	110	2
SLM LT SP	42	31	252	7.2	110	1
DIMMITT			PAYMASTER 202		88 PERCENT	
LM LT SP	52 1/	33	247	7.6	120	2
BG	82 2/	33	255	8.2	120	2
DODSON			TAMCOT SP-21		75 PERCENT	
LM LT SP	52	31	248	7.6	110	4
LM LT SP	52	31	251	7.7	120	2
EARTH			GSA-71		85 PERCENT	
LM LT SP	52 1/	32	247	7.6	110	0
LM LT SP	52 1/	32	256	8.3	110	6
FLUVANNA			WESTERN 44		95 PERCENT	
SLM LT SP	42	30	236	7.5	110	0
LM LT SP	52	30	232	7.1	110	2
GOODLAND			STRIPPER 31		80 PERCENT	
LM LT SP	52	32	254	7.6	120	0
BG	82 2/	32	255	8.1	110	0

1/ REDUCED FROM 42 BECAUSE OF BARK.
2/ REDUCED FROM 52 BECAUSE OF BARK.

TABLE 5A. - CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES			
			STRENGTH	ELONGATION	APPEARANCE	NEPS
GRADE	: STAPLE		8s	8s	8s	8s
NAME	CODE	32ND IN.	LBS.	PCT.	INDEX	NO.
NORTHWEST TEXAS						
HALE CENTER		GSA-71			80 PERCENT	
SLM LT SP	42	31	253	7.5	110	2
LM LT SP	52 [1]	32	245	7.5	110	2
HAMLIN		LANKART 611			75 PERCENT	
SLM LT SP	42	31	234	7.5	120	0
M LT SP	32	31	238	6.5	110	0
HEDLEY		LANKART LX 571			80 PERCENT	
SLM LT SP	42	31	248	7.3	120	0
SLM SP	43 [2]	30	242	8.0	100	4
HOBBS		TAMCOT SP-21			75 PERCENT	
LM LT SP	52	32	255	6.9	110	0
SLM LT SP	42	32	244	7.6	110	1
NEW DEAL		STRIPPER 32			80 PERCENT	
LM LT SP	52	32	260	7.4	120	0
LM LT SP	52	32	258	7.2	110	0
NEW HOME		GSA-71			70 PERCENT	
SLM LT SP	42	30	237	7.5	120	0
SLM LT SP	42	31	240	6.8	110	0
PADUCAH		LANKART 611			90 PERCENT	
SLM LT SP	42	31	229	7.0	110	0
LM SP	53 [3]	30	236	7.1	110	2

[1] REDUCED FROM 42 BECAUSE OF BARK.
[2] REDUCED FROM 33 BECAUSE OF BARK.
[3] REDUCED FROM 43 BECAUSE OF BARK.

TABLE 5A. - CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES			
			STRENGTH	ELONGATION	APPEARANCE	NEPS
GRADE	:	STAPLE	8s	8s	8s	8s
NAME	CODE	32ND IN.	LBS.	PCT.	INDEX	NO.
NORTHWEST TEXAS						
SNYDER		WESTERN 44			70 PERCENT	
SLM LT SP	42	31	244	7.3	130	0
SLM LT SP	42	31	249	7.2	120	0
THROCKMORTON		LANKART 57			85 PERCENT	
SLM SP	43	31	219	6.4	110	2
SLM SP	43	31	211	6.5	110	1
VERNON		LOCKETT 77			99 PERCENT	
LM LT SP	52	32	267	6.7	120	0
SLM LT SP	42	31	261	6.4	110	4
WEINERT		LANKART LX 571			80 PERCENT	
SLM LT SP	42	32	242	6.5	110	0
M LT SP	32	31	238	6.7	110	1
OKLAHOMA						
DAVIDSON		LANKART 57			98 PERCENT	
SLM LT SP	42	32	238	6.8	120	0
LM LT SP	52 1/	31	244	7.8	100	0
GREENFIELD		WESTBURN M			100 PERCENT 2/	
LM SP	53 3/	32	259	7.0	110	6
LM SP	53 3/	31	230	7.0	120	2
LONE WOLF		LANKART 57			98 PERCENT	
LM LT SP	52	32	253	6.7	120	0
SLM SP	43	31	234	7.3	100	4

1/ REDUCED FROM 42 BECAUSE OF BARK.
2/ 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.
3/ REDUCED FROM 43 BECAUSE OF BARK.

TABLE 6.--COTTON: AMERICAN UPLAND MEDIUM STAPLE FIBER AND YARN QUALITY CHARACTERISTICS BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1980.

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRO-NAIRE	FIBER STRENGTH		1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
ALABAMA														
ALICEVILLE			DELTAPINE 55				80 PERCENT							
M	31	33	1.00	44	51	91	22	5.4	1.3	1.6	75.0	9.2	31-3	7.0
SLM	41	33	1.02	46	53	90	23	5.9	1.3	2.4	73.5	9.7	32-2	7.0
BRENT			MCNAIR 235				70 PERCENT							
LM PLUS	50	35	1.12	46	49	89	25	5.9	3.0	3.8	76.0	8.0	31-2	8.1[1]
LM	51	35	1.11	45	48	91	25	6.6	2.7	3.7	72.3	8.3	41-3	7.4
MADISON			STONEVILLE 825				99 PERCENT							
M	31	34	1.06	45	52	89	23	5.6	1.2	1.9	76.5	8.8	31-3	5.9
SLM	41	34	1.04	47	55	89	23	5.4	1.3	2.2	76.5	8.8	31-3	6.8[1]
PRATTVILLE			DELTAPINE 41				85 PERCENT							
SLM	41	34	1.09	45	55	81	23	7.7	1.4	1.8	76.0	8.2	31-2	5.9
LM	51	34	1.09	44	49	88	25	6.1	2.2	3.2	72.8	8.4	41-3	6.9
TRINITY			STONEVILLE 213				85 PERCENT							
SLM	41	33	1.02	44	55	86	23	6.1	1.8	2.6	77.3	9.6	21-3	7.0
SLM	41	33	1.03	44	54	83	21	5.9	1.5	2.2	76.5	9.0	31-3	7.1[1]
TYLER			DELTAPINE 61				100 PERCENT							
SLM	41	34	1.09	45	53	86	23	6.8	1.2	2.3	75.7	8.9	31-3	7.0
SLM	41	35	1.15	44	49	83	25	7.5	1.8	2.6	76.0	8.2	31-2	5.3
GEORGIA														
BERLIN			COKER 304				80 PERCENT							
SLM	41	36	1.14	47	49	86	23	5.6	2.3	3.2	75.5	8.8	31-4	6.7
SLM LT SP	42	36	1.15	43	42	84	23	6.2	2.3	2.5	72.8	7.6	41-2	7.2

[1]/COTTON STUCK TO PROCESSING ROLLS.

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES									COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE		STAPLE	22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
ALABAMA																	
ALICEVILLE			DELTAPINE 55					80 PERCENT									
M	31	33	96	27[1]	4.9	4.1	120	90	30	138	42	75.5	9.9	91.3	4.4	26.7	33.2
SLM	41	33	94	28[1]	5.4	4.4	110	80	40	118	43	78.4	10.1	90.9	4.2	24.3	34.5
BRENT			MCNAIR 235					70 PERCENT									
LM PLUS	50	35	118	41	6.4	5.0	110	70	60	242	70	82.3	9.7	92.1	4.4	26.6	33.1
LM	51	35	118	42	6.0	4.9	110	80	60	176	67	80.8	9.3	92.2	4.6	27.8	32.4
MADISON			STONEVILLE 825					99 PERCENT									
M	31	34	99	31	5.6	4.5	100	70	104	276	50	77.1	9.8	89.8	5.1	29.3	31.5
SLM	41	34	96	29	5.4	3.9	110	70	76	216	47	81.4	10.0	90.9	4.5	27.0	33.0
PRATTVILLE			DELTAPINE 41					85 PERCENT									
SLM	41	34	112	39	6.7	5.2	120	70	94	318	49	82.2	9.8	92.3	4.4	26.6	33.0
LM	51	34	106	37	6.0	4.8	110	90	34	96	49	78.7	9.3	93.3	3.8	28.7	32.2
TRINITY			STONEVILLE 213					85 PERCENT									
SLM	41	33	97	29	5.6	4.0	110	60	86	176	42[2]	76.1	10.1	91.0	4.1	27.3	33.0
SLM	41	33	91	27	5.5	3.9	100	70	94	282	45	81.3	10.2	92.0	4.8	24.8	34.1
TYLER			DELTAPINE 61					100 PERCENT									
SLM	41	34	104	36	6.1	4.6	110	80	44	190	58	80.3	9.8	92.8	4.4	25.6	34.0
SLM	41	35	119	43	6.9	5.4	100	90	58	334	69	80.5	9.5	93.3	3.8	25.5	34.2
GEORGIA																	
BERLIN			COKER 304					80 PERCENT									
SLM	41	36	112	38	5.7	4.4	100	70	118	312	64	80.6	9.7	92.3	4.3	24.2	34.6
SLM LT SP	42	36	107	35	6.1	4.7	120	90	26	52	70	79.1	8.6	90.8	4.0	30.1	31.0

[1] END BREAKAGE TOO HIGH TO SPIN 50s YARN. 44s YARN SPUN AND STRENGTH ADJUSTED TO THE EQUIVALENT OF 50s.
[2] EXCESSIVE END BREAKAGE.

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
GEORGIA														
BOSTWICK			DIXIE KING 111				100 PERCENT							
SLM LT SP	42	33	1.06	45	47	83	23	6.6	2.6	3.7	75.0	9.6	31-3	7.7
SLM	41	34	1.04	46	47	80	21	6.8	2.1	3.2	72.3	9.0	41-3	7.1
DAWSON			STONEVILLE 825				90 PERCENT							
SLM SP	43	35	1.09	43	45	93	24	5.1	2.7	3.7	68.5	9.6	42-2	7.5
SLM	41	36	1.13	42	48	83	22	5.7	1.6	2.8	74.2	7.4	41-1	6.5
ELBERTON			COKER 315				80 PERCENT							
M	31	36	1.12	47	47	90	24	6.5	1.5	2.2	79.3	9.1	21-1	5.6
LM SP	53	35	1.10	44	38	86	24	7.2	3.6	5.1	70.2	10.0	42-1	8.8
NORTH CAROLINA														
TARBORO			COKER 304				72 PERCENT							
SLM	41	32	1.02	45	52	86	23	5.6	1.5	2.3	74.5	9.3	31-3	6.8
LM	51	33	1.04	47	52	89	24	6.4	2.2	3.2	75.7	8.2	31-2	8.1
SOUTH CAROLINA														
AIKEN			COKER 315				92 PERCENT							
SLM	41	35	1.12	44	48	83	24	5.7	2.4	3.2	76.8	9.0	31-3	6.5
SLM	41	36	1.09	44	45	81	24	6.8	1.9	2.8	79.0	7.9	31-1	7.1
ARKANSAS														
HUGHES			STONEVILLE 825				100 PERCENT							
SLM	41	34	1.06	44	51	92	22	4.3	1.8	2.4	75.3	8.5	31-4	6.5
SLM	41	35	1.08	43	49	94	24	5.0	1.4	2.2	78.3	8.4	31-1	7.1
LEACHVILLE			STONEVILLE 213				90 PERCENT							
SLM	41	37	1.14	45	41	86	23	6.6	3.1	4.1	79.0	8.0	31-1	8.1 1/
LM	51	36	1.12	43	39	83	22	6.7	3.1	4.2	73.2	7.6	41-2	6.7

1/COTTON STUCK TO PROCESSING ROLLS.

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES									COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE	: STAPLE		22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
GEORGIA																	
BOSTWICK			DIXIE KING III					100 PERCENT									
SLM LT SP	42	33	104	35	6.4	4.9	90	60	104	240	57	79.0	10.7	91.2	4.9	25.0	33.9
SLM	41	34	94	32	5.6	4.4	110	70	28	138	52	79.4	9.7	92.1	4.3	26.7	33.2
DAWSON			STONEVILLE 825					90 PERCENT									
SLM SP	43	35	98	31	5.5	3.8	110	80	60	82	52	74.5	10.0	90.3	5.0	29.0	31.6
SLM	41	36	97	29	5.8	4.0	110	70	44	86	51	79.3	8.0	91.7	4.5	28.7	32.0
ELBERTON			COKER 315					80 PERCENT									
M	31	36	115	42	6.6	5.4	100	60	92	254	77	82.5	10.1	92.5	4.0	23.8	35.3
LM SP	53	35	117	41	6.8	5.4	110	90	28	190	83	76.0	10.9	91.5	4.6	29.3	31.3
NORTH CAROLINA																	
TARBORO			COKER 304					72 PERCENT									
SLM	41	32	99	31	5.5	4.6	110	80	72	210	43	76.4	9.8	89.9	5.4	25.6	33.6
LM	51	33	101	33	5.5	4.4	100	70	64	190	46	82.0	9.5	90.2	4.4	27.3	32.4
SOUTH CAROLINA																	
AIKEN			COKER 315					92 PERCENT									
SLM	41	35	116	42	6.6	5.5	80	60	134	400	74	77.6	10.1	91.9	4.9	25.5	33.8
SLM	41	36	104	37	6.5	5.2	80	60	72	290	65	83.6	9.2	92.5	4.3	27.9	32.5
ARKANSAS																	
HUGHES			STONEVILLE 825					100 PERCENT									
SLM	41	34	98	31	5.4	3.9	70	70	84	376	51	75.5	9.3	90.5	4.0	28.8	32.0
SLM	41	35	101	35	5.5	4.5	80	60	72	550	53	79.1	8.8	91.4	4.1	26.4	33.9
LEACHVILLE			STONEVILLE 213					90 PERCENT									
SLM	41	37	120	43	6.7	5.7	80	60	94	386	70	82.7	9.2	92.9	4.4	26.4	33.3
LM	51	36	103	36	6.3	4.9	110	70	26	246	60	78.8	8.5	90.5	4.6	29.1	31.5

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRO-NAIRE	FIBER STRENGTH		1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE		STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
ARKANSAS														
LEACHVILLE			VAIL 7				100 PERCENT							
M	31	36	1.12	43	46	90	22	5.3	1.5	2.2	79.0	8.4	21-2	7.4
SLM	41	36	1.10	43	38	85	23	6.9	1.9	2.8	78.0	8.5	31-1	7.4
MCGEHEE			STONEVILLE 213				90 PERCENT							
SLM	41	35	1.12	43	51	85	22	5.6	1.4	2.5	76.0	9.1	31-3	7.0
SLM	41	36	1.11	43	43	85	22	6.0	1.4	2.7	75.5	8.1	31-2	6.5
PICKENS			STONEVILLE 506				100 PERCENT							
SLM	41	35	1.12	44	49	91	24	6.2	2.1	2.9	76.0	9.0	31-3	6.9
SLM	41	36	1.12	43	43	86	23	6.4	1.1	2.5	76.3	8.0	31-2	7.2
PINE BLUFF			DELTAPINE 61				100 PERCENT							
SLM	41	36	1.16	46	48	84	25	8.0	1.8	2.6	77.0	8.6	31-3	6.9
SLM	41	36	1.13	43	39	80	24	7.9	1.6	2.5	73.7	7.8	41-1	6.6
VICTORIA			STONEVILLE 825				100 PERCENT							
SLM	41	36	1.12	44	51	88	23	5.3	2.8	3.7	78.0	8.4	31-1	8.1
SLM	41	36	1.13	45	48	88	23	5.5	2.5	3.6	77.5	7.8	31-2	9.1
YORKTOWN			DELTAPINE 41				100 PERCENT							
LM	51	36	1.14	45	42	90	23	5.4	3.2	4.1	72.5	7.8	41-2	7.3
LM	51	35	1.12	45	37	84	23	6.4	2.7	3.7	73.7	7.4	41-2	6.4
LOUISIANA														
BELCHER			DELTAPINE 61				80 PERCENT							
SLM	41	34	1.07	42	46	87	24	4.8	1.8	2.5	77.7	8.6	31-1	7.7
SLM LT SP	42	36	1.11	44	47	88	23	6.4	1.4	2.3	75.0	8.6	31-4	6.1
EPPS			STONEVILLE 825				75 PERCENT							
SLM	41	33	1.04	44	44	93	24	4.9	1.8	2.5	75.5	9.0	31-3	6.9
SLM	41	36	1.06	45	47	91	24	5.6	1.7	2.5	76.2	8.2	31-2	6.9

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES									COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS			GRAY		BLEACHED		DYED	
GRADE		STAPLE	22s	50s	22s	50s	22s	50s	22s	50s	SPY NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
ARKANSAS																	
LEACHVILLE			VAIL 7					100 PERCENT									
M	31	36	100	34	6.3	4.7	70	60	166	532	58	83.2	9.6	91.4	4.5	26.9	33.0
SLM	41	36	102	36	7.1	5.3	80	60	132	472	60	82.8	9.3	90.6	4.9	30.8	30.3
MCGEHEE			STONEVILLE 213					90 PERCENT									
SLM	41	35	101	34	5.9	4.8	110	70	80	314	57	80.6	9.4	92.2	4.1	23.4	35.2
SLM	41	36	98	33	6.2	4.8	110	70	20	160	57	80.5	8.5	92.3	4.1	28.1	32.4
PICKENS			STONEVILLE 506					100 PERCENT									
SLM	41	35	110	37	6.2	4.7	120	90	44	230	64	81.8	9.5	91.5	4.4	26.4	33.4
SLM	41	36	111	39	6.4	5.4	100	70	66	230	67	81.7	8.8	92.3	3.6	28.5	32.4
PINE BLUFF			DELTAPINE 61					100 PERCENT									
SLM	41	36	117	41	6.6	5.3	110	70	126	402	75	81.4	9.4	91.2	4.5	27.1	32.8
SLM	41	36	110	39	7.0	5.4	80	60	104	372	72	79.4	8.6	92.2	3.8	28.4	32.4
VICTORIA			STONEVILLE 825					100 PERCENT									
SLM	41	36	105	35	5.8	4.8	90	70	90	450	59	82.4	9.4	92.4	4.1	26.5	33.5
SLM	41	36	107	38	6.1	4.8	80	60	112	360	62	82.6	9.0	92.1	3.9	26.6	33.1
YORKTOWN			DELTAPINE 41					100 PERCENT									
LM	51	36	118	43	6.8	5.0	90	60	98	354	70	80.4	9.0	92.4	4.7	30.3	30.7
LM	51	35	107	37	6.3	4.8	110	80	16	46	62	79.9	8.3	91.9	3.5	28.6	31.9
LOUISIANA																	
BELCHER			DELTAPINE 61					80 PERCENT									
SLM	41	34	99	32 [1]	5.6	4.1	80	60	194	498	49	78.5	9.2	88.1	6.2	26.7	32.4
SLM LT SP	42	36	112	39	6.6	5.3	80	60	92	354	70	79.8	9.3	92.5	4.4	25.1	34.1
EPPS			STONEVILLE 825					75 PERCENT									
SLM	41	33	102	33	5.5	4.3	110	80	60	244	55	75.1	9.4	91.5	4.3	27.0	33.2
SLM	41	36	112	39	6.0	5.1	90	70	72	190	62	80.1	9.4	92.8	4.3	26.6	33.3

[1] EXCESSIVE END BREAKAGE FOR 50s YARN.

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
LOUISIANA														
LAKE PROVIDENCE			DELTAPINE 41				75 PERCENT							
LM	51	34	1.08	43	46	92	25	5.3	3.3	3.9	73.5	8.6	41-3	8.5
LM	51	35	1.11	45	41	90	24	6.1	3.5	4.5	72.2	8.3	41-3	8.5
LAKE PROVIDENCE			STONEVILLE 825				100 PERCENT							
LM PLUS	50	34	1.09	43	49	86	24	4.7	2.6	3.3	75.2	7.7	41-1	7.5
LM	51	35	1.12	45	45	89	23	5.3	3.2	4.4	74.5	7.4	41-1	7.3
SICILY ISLAND			STONEVILLE 213				90 PERCENT							
LM	51	34	1.07	44	49	94	25	4.9	2.6	3.5	72.0	9.1	41-3	8.3
LM LT SP	52	35	1.09	47	50	92	23	5.6	3.9	4.8	69.2	9.8	42-1	7.9
MISSISSIPPI														
ARCOLA			STONEVILLE 825				100 PERCENT							
M	31	35	1.07	44	53	92	23	4.5	1.3	2.0	79.3	8.2	21-2	6.6
SLM	41	35	1.08	44	52	93	23	4.6	1.4	2.4	76.0	8.2	31-2	7.3
DUNCAN			DELTAPINE 41				100 PERCENT							
SLM LT SP	42	34	1.08	42	47	95	24	5.9	2.6	3.4	71.5	9.7	42-1	7.6
SLM LT SP	42	34	1.06	44	49	94	24	5.6	2.2	3.3	74.5	9.0	31-4	8.2
GREENVILLE			DELTAPINE 61				100 PERCENT							
SLM	41	35	1.06	45	46	92	25	6.6	1.7	2.4	73.0	8.8	41-3	7.2
SLM	41	35	1.11	45	50	82	24	6.9	1.9	2.6	77.5	8.2	31-1	6.6
GREENVILLE			STONEVILLE 213				100 PERCENT							
SLM	41	34	1.06	44	50	89	23	5.6	1.6	2.5	74.8	8.9	31-4	7.6
SLM LT SP	42	35	1.07	44	49	90	24	6.0	2.3	2.8	76.0	9.0	31-3	7.3

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE		STAPLE	22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
LOUISIANA																	
LAKE PROVIDENCE			DELTAPINE 41					75 PERCENT									
LM	51	34	116	41	6.2	5.0	90	70	80	268	65	76.6	9.2	91.2	4.7	26.9	32.8
LM	51	35	118	41	6.5	5.6	90	70	82	462	73	78.6	9.3	91.2	4.6	25.8	33.5
LAKE PROVIDENCE			STONEVILLE 825					100 PERCENT									
LM PLUS	50	34	106	36	5.7	4.8	110	70	140	396	59	76.7	8.9	91.0	4.3	26.3	33.2
LM	51	35	109	38	5.9	4.7	80	70	172	512	63	79.0	8.7	92.2	3.8	25.6	33.8
SICILY ISLAND			STONEVILLE 213					90 PERCENT									
LM	51	34	105	35	5.4	4.3	90	70	64	292	56	73.7	9.5	91.0	4.4	26.6	32.9
LM LT SP	52	35	109	38	5.9	4.6	100	70	118	250	61	74.4	10.3	90.4	4.8	27.4	32.4
MISSISSIPPI																	
ARCOLA			STONEVILLE 825					100 PERCENT									
M	31	35	102	33	5.4	4.2	110	70	60	144	48	79.6	9.0	91.2	3.7	27.2	33.2
SLM	41	35	98	32	5.5	4.1	110	60	64	276	51	82.0	9.0	91.2	3.7	26.2	33.4
DUNCAN			DELTAPINE 41					100 PERCENT									
SLM LT SP	42	34	104	34	5.3	4.4	70	60	62	380	58	72.7	10.1	91.5	4.2	27.0	32.9
SLM LT SP	42	34	100	31	5.4	3.9	90	60	34	294	52	81.0	9.5	90.4	4.8	27.2	32.6
GREENVILLE			DELTAPINE 61					100 PERCENT									
SLM	41	35	115	38	6.4	4.8	100	70	52	178	58	74.5	9.2	92.1	4.8	26.8	32.9
SLM	41	35	114	41	6.5	5.3	100	70	66	236	61	81.4	9.3	92.8	3.9	25.2	34.3
GREENVILLE			STONEVILLE 213					100 PERCENT									
SLM	41	34	106	36	5.7	4.3	90	80	68	262	51	76.4	9.4	91.1	4.7	26.0	33.5
SLM LT SP	42	35	100	33	5.8	4.7	100	70	56	434	52	80.6	9.9	91.2	4.1	20.3	37.3

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE		STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
MISSISSIPPI														
GREENWOOD			STONEVILLE 825				100 PERCENT							
SLM	41	34	1.07	44	50	94	24	4.8	2.2	3.2	74.0	8.8	31-4	8.4
LM LT SP	52	35	1.06	44	49	94	22	4.9	4.3	5.6	72.0	8.8	41-3	10.3
INDIANOLA			DES 56				86 PERCENT							
SLM LT SP	42	33	1.04	45	53	93	24	5.7	3.0	4.0	70.0	9.2	42-2	8.8
SLM LT SP	42	34	1.08	45	49	91	24	5.8	3.6	4.8	71.7	9.1	41-3	9.3
LELAND			STONEVILLE 506				100 PERCENT							
LM	51	34	1.07	44	48	88	22	5.4	3.1	3.6	72.3	9.2	41-3	8.8
LM	51	34	1.07	44	53	91	24	5.7	3.5	4.4	73.5	8.4	41-3	9.7
SILVER CITY			DELTAPINE 55				70 PERCENT							
SLM	41	34	1.04	44	52	92	23	4.7	1.4	2.2	74.5	8.8	31-4	7.0
SLM LT SP	42	34	1.03	45	44	88	24	5.9	1.3	1.8	70.2	8.8	41-4	7.3
WATER VALLEY			DELTAPINE 61				70 PERCENT							
LM	51	34	1.05	43	51	88	22	5.6	2.2	2.8	76.0	8.6	31-4	7.9
LM	51	35	1.04	43	48	87	22	6.1	3.2	4.1	73.8	8.0	41-1	8.8
MISSOURI														
BRAGG CITY			STONEVILLE 213				80 PERCENT							
SLM	41	35	1.11	46	45	91	24	5.6	2.6	3.5	78.0	7.6	31-1	7.7
SLM LT SP	42	35	1.08	44	42	80	23	7.1	2.5	3.5	70.2	9.1	42-2	7.1
WARDELL			STONEVILLE 825				90 PERCENT							
SLM PLUS	40	36	1.12	45	50	90	24	5.7	1.8	2.5	77.5	8.6	31-1	7.1
SLM	41	36	1.11	45	43	87	24	6.5	1.5	2.6	77.5	7.8	31-2	7.0

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES									COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE		STAPLE	22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
MISSISSIPPI																	
GREENWOOD			STONEVILLE 825					100 PERCENT									
SLM	41	34	95	30[2]	5.2	3.7	110	70	100	312	40[1]	74.7	9.6	91.2	4.5	26.2	33.4
LM LT SP	52	35	92	31[2]	5.3	4.4	100	70	126	282	42	79.6	9.7	91.8	4.2	26.7	33.1
INDIANOLA			DES 56					86 PERCENT									
SLM LT SP	42	33	100	32	5.3	4.1	110	90	94	304	49	71.7	9.9	90.0	4.5	25.6	34.1
SLM LT SP	42	34	106	36	5.8	4.4	110	80	82	216	61	77.8	9.9	90.6	4.4	26.8	32.9
LELAND			STONEVILLE 506					100 PERCENT									
LM	51	34	100	33	6.0	4.4	110	80	82	314	51	74.8	9.5	90.4	4.7	27.9	32.2
LM	51	34	101	32	5.4	4.0	110	90	92	222	49	81.0	9.5	90.6	4.8	26.0	33.6
SILVER CITY			DELTAPINE 55					70 PERCENT									
SLM	41	34	104	33	5.5	4.1	100	60	66	296	52	75.0	9.3	91.2	4.4	28.5	32.4
SLM LT SP	42	34	98	31	5.5	4.1	110	70	46	254	50	73.3	9.4	91.5	4.5	28.1	32.4
WATER VALLEY			DELTAPINE 61					70 PERCENT									
LM	51	34	95	32	5.7	4.2	90	60	64	414	50	81.1	9.6	91.5	4.4	27.3	32.8
LM	51	35	96	30	5.9	4.6	80	70	80	346	49	79.0	9.2	90.2	4.4	27.6	32.4
MISSOURI																	
BRAGG CITY			STONEVILLE 213					80 PERCENT									
SLM	41	35	114	41	6.4	5.4	110	70	88	330	69	81.7	9.6	91.6	4.2	25.3	33.8
SLM LT SP	42	35	104	37	6.7	5.4	90	70	66	176	63	78.6	9.7	91.5	4.4	28.1	32.1
WARDELL			STONEVILLE 825					90 PERCENT									
SLM PLUS	40	36	108	37	6.1	5.0	110	70	88	250	64	78.1	9.3	90.6	5.2	26.4	33.6
SLM	41	36	114	39	6.7	5.4	100	70	98	178	70	82.0	9.2	91.7	3.5	27.8	32.5

[1] EXCESSIVE END BREAKAGE.
[2] END BREAKAGE TOO HIGH TO SPIN 50s YARN. 44s YARN SPUN AND STRENGTH ADJUSTED TO THE EQUIVALENT OF 50s.

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
TENNESSEE														
BELLS			STONEVILLE 825				80 PERCENT							
SLM	41	35	1.06	46	48	86	23	5.8	1.3	1.9	77.0	8.0	31-2	5.6
SLM	41	35	1.08	45	42	86	25	6.4	2.3	3.3	75.0	8.4	41-3	7.3
BOGOTA			DELTAPINE 55				100 PERCENT							
SLM	41	35	1.11	45	50	88	22	5.6	2.2	3.0	78.0	7.8	31-1	7.0
LM	51	35	1.11	44	35	79	22	6.3	4.2	5.5	76.5	8.3	31-2	7.9
BRADEN			DELTAPINE 41				90 PERCENT							
SLM	41	35	1.09	43	44	88	23	6.3	2.1	3.0	78.0	8.4	31-1	7.2
SLM	41	34	1.06	44	41	82	23	6.3	1.2	2.3	77.0	8.0	31-2	5.9
MASON			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.07	46	46	83	22	6.5	1.7	2.7	76.5	9.2	31-3	6.8
SLM	41	34	1.07	45	46	81	22	8.1	1.4	2.3	76.7	8.6	31-3	7.0
NEWBERN			STONEVILLE 825				90 PERCENT							
M	31	35	1.08	46	48	84	22	6.4	1.2	2.4	79.0	8.4	21-2	6.4
LM	51	35	1.09	45	42	82	21	6.6	2.3	3.5	75.0	8.1	41-1	7.2
SOUTH TEXAS														
BROWNSVILLE			GS 3774				65 PERCENT							
SLM	41	34	1.06	44	42	81	22	7.2	4.2	3.5	76.2	8.2	31-2	6.2
SLM LT SP	42	34	1.07	42	36	77	23	6.8	2.2	3.3	76.3	8.8	31-3	6.7
SLM	41	34	1.10	45	43	78	22	6.4	1.9	2.5	76.2	8.3	31-2	7.0
COMBES			STONEVILLE 256				70 PERCENT							
SLM	41	34	1.04	43	48	86	24	6.8	1.7	2.7	75.8	8.8	31-3	6.2
SLM	41	34	1.08	41	46	89	23	5.2	2.1	3.2	78.0	8.0	31-1	6.3
LM LT SP	52	35	1.13	44	38	84	22	5.9	3.0	4.0	71.5	9.0	41-3	7.7

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES									COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE		STAPLE	22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
TENNESSEE																	
BELLS			STONEVILLE 825					80 PERCENT									
SLM	41	35	107	35	6.2	4.8	100	60	72	284	59	78.3	9.5	91.5	4.2	27.6	32.6
SLM	41	35	110	36	6.8	5.0	90	70	88	214	62	80.6	9.5	91.8	4.7	28.8	31.8
BOGOTA			DELTAPINE 55					100 PERCENT									
SLM	41	35	109	36	6.2	4.6	110	70	90	206	56	82.8	9.6	90.2	4.4	27.6	32.6
LM	51	35	107	38	7.1	5.5	110	70	10	128	67	82.2	9.0	91.3	4.4	30.5	30.7
BRADEN			DELTAPINE 41					90 PERCENT									
SLM	41	35	111	37	6.4	5.0	90	70	78	258	62	82.7	9.2	92.4	4.1	28.8	31.8
SLM	41	34	108	37	5.9	5.0	80	60	86	204	64	81.8	9.0	92.3	3.5	28.1	32.6
MASON			STONEVILLE 213					100 PERCENT									
SLM	41	35	104	36	6.4	4.9	90	70	134	608	63	80.4	10.1	92.7	4.7	26.8	32.9
SLM	41	34	105	36	6.8	5.5	90	70	80	202	60	81.1	9.9	93.2	4.0	26.7	33.6
NEWBERN			STONEVILLE 825					90 PERCENT									
M	31	35	108	36	6.3	4.6	90	60	64	252	47	82.6	9.8	92.2	4.1	26.8	33.2
LM	51	35	107	37	6.8	5.1	80	60	86	278	63	81.8	9.3	92.5	3.6	29.4	31.9
SOUTH TEXAS																	
BROWNSVILLE			GS 3774					65 PERCENT									
SLM	41	34	103	36	6.4	5.3	110	70	88	150	66	76.8	8.9	94.5	4.2	27.0	32.9
SLM LT SP	42	34	99	34	5.9	5.0	80	60	48	268	67	76.8	9.4	94.4	3.8	26.0	33.7
SLM	41	34	147	37	6.4	5.3	110	70	54	118	68	77.4	9.3	98.7	4.5	28.8	32.0
COMBES			STONEVILLE 256					70 PERCENT									
SLM	41	34	106	35	6.8	5.0	110	80	48	210	62	76.6	9.6	93.6	4.4	26.2	34.1
SLM	41	34	103	36	5.7	4.5	90	70	68	242	63	77.8	8.7	94.5	3.8	27.6	32.7
LM LT SP	52	35	102	36	6.3	5.0	80	60	52	350	63	73.0	9.7	96.1	6.0	33.8	28.1

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
SOUTH TEXAS														
DRISCOLL			TAMCOT SP-37				90 PERCENT							
SLM LT SP	42	33	1.04	43	38	72	19	7.1	2.5	3.5	77.5	9.4	21-3	8.3
LM SP	53	33	1.02	40	42	78	20	6.2	4.1	5.2	70.7	10.9	33-2	11.0
LM LT SP	52	33	1.04	42	37	71	21	7.0	4.6	5.4	70.5	8.8	41-4	9.3
EAST BERNARD			STONEVILLE 825				70 PERCENT							
LM LT SP	52	34	1.08	45	47	84	22	5.8	4.5	5.3	70.0	8.7	41-4	10.4
LM LT SP	52	34	1.06	46	48	82	23	5.1	4.8	6.1	71.0	9.4	42-1	10.1
LM LT SP	52	34	1.07	45	44	87	22	5.5	4.4	5.8	69.7	9.2	42-2	9.8
LA FERIA			COKER 304				100 PERCENT[1/]							
SLM LT SP	42	35	1.15	44	43	83	24	5.0	2.0	3.2	75.8	9.3	31-3	7.1
LYFORD			STONEVILLE 213				100 PERCENT							
SLM	41	34	1.04	43	45	84	23	6.5	1.5	2.5	76.2	8.8	31-3	6.4
SLM LT SP	42	34	1.08	43	45	82	23	6.1	2.4	3.2	75.7	8.6	31-4	8.5
SLM LT SP	42	34	1.10	44	39	76	22	6.3	2.5	3.4	72.5	8.1	41-3	8.4
LYFORD			TPSA 1633				100 PERCENT[1/]							
LM LT SP	52	35	1.13	44	42	83	22	5.7	3.5	4.4	73.7	9.4	31-4	8.3
LYFORD			TPSA 9070				100 PERCENT[1/]							
SLM LT SP	42	34	1.09	42	43	86	23	6.1	2.9	3.9	75.3	8.8	31-4	8.8
MCALLEN			TAMCOT CAMD E				100 PERCENT							
SLM PLUS	40	35	1.13	45	46	87	23	4.8	1.7	2.3	79.7	8.8	21-1	6.9
MISSION			STONEVILLE 825				100 PERCENT							
SLM	41	35	1.10	44	46	92	26	5.3	1.9	2.4	75.3	9.7	31-3	6.5
SLM	41	35	1.13	45	44	85	23	4.8	2.1	2.9	77.0	8.5	31-1	7.5
LM LT SP	52	35	1.13	44	38	85	24	5.4	3.5	4.4	72.0	9.2	41-3	9.1

[1/] 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE		STAPLE	22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
SOUTH TEXAS																	
DRISCOLL			TAMCOT SP-37					90 PERCENT									
SLM LT SP	42	33	95	32	7.5	4.8	60	60	78	200	59	79.2	9.7	92.7	3.6	30.3	31.2
LM SP	53	33	86	27	6.1	4.4	70	60	84	230	45	71.8	11.3	97.2	5.3	28.4	31.7
LM LT SP	52	33	96	33	6.4	5.0	70	60	82	225	57	73.5	9.4	97.9	4.5	28.7	31.8
EAST BERNARD			STONEVILLE 825					70 PERCENT									
LM LT SP	52	34	106	37	5.8	4.8	70	60	77	233	59	73.2	9.6	96.4	4.6	27.3	32.5
LM LT SP	52	34	101	33	5.7	4.6	90	60	112	414	59	73.7	9.7	91.0	3.6	27.3	32.5
LM LT SP	52	34	96	34	5.8	4.7	70	60	126	478	55	72.1	10.0	90.9	4.2	27.3	32.9
LA FERIA			COKER 304					100 PERCENT[1]									
SLM LT SP	42	35	123	45	7.0	5.8	70	60	140	398	76	76.4	10.1	92.5	4.5	30.2	30.8
LYFORD			STONEVILLE 213					100 PERCENT									
SLM	41	34	99	34	6.4	4.5	90	70	114	442	57	76.5	9.3	94.8	4.5	25.0	34.1
SLM LT SP	42	34	102	35	6.4	4.8	90	60	88	262	60	76.2	9.3	93.3	4.3	26.4	33.2
SLM LT SP	42	34	105	37	7.3	5.1	70	60	94	392	62	73.7	9.4	91.6	4.3	30.7	30.6
LYFORD			TPSA 1633					100 PERCENT[1]									
LM LT SP	52	35	117	41	6.6	4.9	70	60	174	328	80	73.9	10.5	91.6	4.5	29.1	31.3
LYFORD			TPSA 9070					100 PERCENT[1]									
SLM LT SP	42	34	106	37	6.2	5.0	80	70	61	151	59	68.8	9.2	89.3	4.4	28.4	32.3
MCALLEN			TAMCOT CAMD E					100 PERCENT									
SLM PLUS	40	35	112	39	6.1	4.7	110	80	44	172	65	78.4	10.0	98.2	4.8	28.6	31.7
MISSION			STONEVILLE 825					100 PERCENT									
SLM	41	35	118	43	6.0	4.8	90	80	70	346	70	76.2	10.0	93.8	4.2	25.3	33.6
SLM	41	35	111	39	6.1	4.8	90	70	100	220	70	77.6	10.0	97.0	5.1	27.7	31.9
LM LT SP	52	35	119	45	6.4	5.1	60	60	118	388	79	73.5	10.1	98.1	5.1	29.7	30.8

[1] 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRO-NAIRE	FIBER STRENGTH		1/8" ELON-GATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
SOUTH TEXAS													
PALACIOS		DELTAPINE 55				90 PERCENT							
LM LT SP 52	35	1.14	45	43	86	23	5.4	4.5	5.4	72.7	8.6	41-3	9.4
LM LT SP 52	34	1.08	44	43	86	23	5.8	2.9	3.9	65.8	8.4	51-4	8.5
LM LT SP 52	34	1.08	44	44	84	23	5.9	2.8	4.2	67.0	8.8	52-1	8.1
RIO GRANDE CITY		MCNAIR 220				90 PERCENT							
LM 51	35	1.09	44	47	93	27	5.3	4.7	5.7	73.8	9.5	31-4	7.6
LM PLUS 50	35	1.12	45	38	87	25	4.9	3.1	3.9	77.2	9.0	21-4	8.1
SLM LT SP 42	35	1.14	46	41	87	24	5.2	2.6	3.4	76.5	9.2	31-3	7.8
SAN BENITO		PAYMASTER 145				100 PERCENT[1]							
LM PLUS 50	33	1.03	45	43	80	22	5.6	2.5	3.2	76.7	8.7	31-3	8.4
TAFT		TAMCOT SP-37H				90 PERCENT							
SLM LT SP 42	33	1.05	43	41	88	25	6.1	2.2	3.0	75.5	9.6	31-3	7.2
SLM LT SP 42	33	1.08	43	39	77	22	6.1	2.2	3.1	78.2	8.4	31-1	8.1
LM LT SP 52	34	1.08	44	36	76	21	5.7	4.0	5.4	75.5	8.2	31-2	10.4
CENTRAL TEXAS													
BATESVILLE		STONEVILLE 213				90 PERCENT							
SLM 41	34	1.07	45	42	80	22	6.4	2.4	3.2	77.0	9.6	21-4	7.6
LM 51	35	1.08	45	44	81	22	6.9	2.8	4.2	72.5	8.2	41-3	8.6
NAVASOTA		DELTAPINE 61				95 PERCENT							
SLM LT SP 42	35	1.07	44	43	88	23	6.5	2.4	3.3	71.3	8.8	41-3	7.5
SLM LT SP 42	34	1.07	45	49	86	25	6.7	1.6	2.3	74.5	17.8	41-1	6.6

[1]/ 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES									COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE		STAPLE	22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
SOUTH TEXAS																	
PALACIOS			DELTAPINE 55					90 PERCENT									
LM LT SP	52	35	117	43	6.5	5.4	90	60	114	704	75	76.1	10.3	97.2	4.8	26.8	32.9
LM LT SP	52	34	106	37	5.6	4.5	70	60	136	578	65	75.7	9.8	92.5	4.3	29.1	31.8
LM LT SP	52	34	112	37	6.0	4.8	80	60	114	384	68	67.5	9.4	91.0	4.3	28.3	32.4
RIO GRANDE CITY			MCNAIR 220					90 PERCENT									
LM	51	35	126	45	6.3	5.0	90	70	114	402	79	75.9	9.9	94.6	4.7	26.2	33.2
LM PLUS	50	35	122	44	6.3	5.0	70	60	118	382	80	78.3	10.1	99.1	5.3	29.4	31.1
SLM LT SP	42	35	122	44	6.0	4.8	70	70	76	280	81	76.9	10.5	89.8	5.9	29.4	31.2
SAN BENITO			PAYMASTER 145					100 PERCENT[1]									
LM PLUS	50	33	105	35	5.9	4.6	80	70	54	192	53	76.3	9.4	94.4	4.8	26.5	33.1
TAFT			TAMCOT SP-37H					90 PERCENT									
SLM LT SP	42	33	116	40	6.0	5.1	80	60	14	428	71	77.6	10.1	92.4	4.7	28.8	31.7
SLM LT SP	42	33	105	35	6.7	5.1	80	60	86	296	66	78.6	9.4	93.4	3.8	30.6	31.0
LM LT SP	52	34	101	35	6.0	4.8	80	60	114	286	62	75.9	9.9	91.2	4.1	29.9	31.0
CENTRAL TEXAS																	
BATESVILLE			STONEVILLE 213					90 PERCENT									
SLM	41	34	108	36	7.0	5.3	80	60	124	368	61	77.9	10.4	92.6	4.6	26.9	33.3
LM	51	35	100	34	6.5	4.9	90	60	146	396	56	78.6	9.3	91.7	4.7	27.0	32.9
NAVASOTA			DELTAPINE 61					95 PERCENT									
SLM LT SP	42	35	110	37	6.2	4.8	80	60	64	294	63	73.1	9.4	92.4	4.5	27.9	32.2
SLM LT SP	42	34	103	37	5.9	4.8	100	70	46	278	63	81.0	8.8	89.6	4.8	27.8	32.1

[1] 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH			FIBER STRENGTH			SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			
GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.	MICRONAIRE	ZERO GAGE	1/8" GAGE	1/8" ELONGATION	VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	PICKER & CARD WASTE
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
NORTHWEST TEXAS														
ESTACADO		PAYMASTER 404				100 PERCENT								
LM LT SP	52[1]	32	0.98	44	32	77	21	7.5	3.3	5.1	73.5	10.2	32-1	9.0
BG	82[2]	32	0.99	44	32	79	21	8.1	5.6	8.0	71.3	8.9	41-3	11.3
LUBBOCK		COKER 312				100 PERCENT[3]								
SLM LT SP	42[4]	33	1.01	42	35	82	22	6.2	1.7	3.2	73.2	9.7	32-2	7.2
SLM SP	43[4]	33	1.01	42	31	80	21	7.6	2.2	3.4	73.3	10.8	32-1	6.9
PETERSBURG		PAYMASTER 303				70 PERCENT								
SLM LT SP	42	31	0.98	45	39	80	20	6.8	2.3	3.6	74.2	9.6	31-3	7.3
LM LT SP	52[1]	33	1.02	42	28	80	21	7.8	5.3	7.8	72.2	9.9	32-2	9.5
PLAINS		DUNN 119				90 PERCENT								
SLM LT SP	42	34	1.05	44	31	86	25	6.9	1.8	3.3	77.0	9.2	31-3	7.5
LM LT SP	52[1]	35	1.07	42	30	83	24	7.8	2.2	3.4	77.3	8.8	31-3	9.0
RALLS		PAYMASTER 303				86 PERCENT								
SLM LT SP	42	32	1.01	42	30	78	22	7.5	2.3	4.1	75.5	9.6	31-3	6.0[5]
LM LT SP	52[1]	33	1.03	42	30	80	21	7.8	4.8	6.4	73.5	9.6	32-2	9.4
SLATON		PAYMASTER 303				75 PERCENT								
SLM LT SP	42	31	0.98	45	36	82	21	6.4	2.1	3.5	73.8	9.4	31-4	6.6
LM LT SP	52	32	1.01	43	35	83	21	6.1	3.2	4.7	73.8	9.0	31-4	8.2

[1] REDUCED FROM 42 BECAUSE OF BARK.
[2] REDUCED FROM 52 BECAUSE OF BARK.
[3] 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.
[4] REDUCED FROM 33 BECAUSE OF BARK.
[5] COTTON STUCK TO PROCESSING ROLLS.

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE	STAPLE		22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
NORTHWEST TEXAS																	
ESTACADO			PAYMASTER 404					100 PERCENT									
LM LT SP	52[1]	32	85	28[2]	6.4	5.4	100	60	36	82	47	79.5	10.5	92.2	4.8	31.1	30.2
BG	82[3]	32	93	30	7.0	5.3	100	60	50	118	49	79.3	10.5	92.2	4.5	29.4	31.1
LUBBOCK			COKER 312					100 PERCENT[4]									
SLM LT SP	42	33	92	30	5.9	4.6	110	70	44	254	48	78.1	10.5	89.7	4.0	27.0	32.2
SLM SP	43[5]	33	93	28	7.1	5.0	100	60	74	178	47	76.9	11.9	91.5	4.1	28.9	31.6
PETERSBURG			PAYMASTER 303					70 PERCENT									
SLM LT SP	42[1]	31	90	28	6.6	4.6	120	70	14	124	47	79.7	10.7	90.8	5.2	28.3	32.0
LM LT SP	52[1]	33	96	31	7.1	5.5	70	60	18	334	53	78.5	11.1	90.8	3.8	29.5	31.0
PLAINS			DUNN 119					90 PERCENT									
SLM LT SP	42[1]	34	106	35	6.5	4.9	90	60	22	122	59	81.9	10.7	92.0	4.3	29.6	31.5
LM LT SP	52[1]	35	106	37	7.4	5.5	80	60	20	144	64	83.0	10.6	91.1	4.4	30.1	30.7
RALLS			PAYMASTER 303					86 PERCENT									
SLM LT SP	42	32	93	30	6.5	4.8	100	70	30	58	48	80.8	10.6	88.9	3.7	27.1	32.0
LM LT SP	52[1]	33	94	30	7.1	5.3	90	60	48	210	51	79.3	10.5	92.9	4.6	31.2	30.1
SLATON			PAYMASTER 303					75 PERCENT									
SLM LT SP	42	31	90	27	5.8	4.3	100	70	10	84	43	79.3	10.2	90.2	4.9	27.1	31.9
LM LT SP	52	32	92	30	6.2	4.4	120	70	26	58	52	80.6	10.1	91.4	4.4	29.1	31.2

[1] REDUCED FROM 42 BECAUSE OF BARK.
[2] END BREAKAGE TOO HIGH TO SPIN 50s YARN. 44s YARN SPUN AND STRENGTH ADJUSTED TO THE EQUIVALENT OF 50s.
[3] REDUCED FROM 52 BECAUSE OF BARK.
[4] 100 PERCENT SELECTED FOR TESTS, LESS THAN 100 PERCENT IN THE AREA.
[5] REDUCED FROM 33 BECAUSE OF BARK.

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
ARIZONA														
BUCKEYE			DELTAPINE 55				93 PERCENT							
SLM	41	34	1.07	41	43	87	22	5.8	2.0	3.2	78.3	8.2	31-1	6.9
LM	51	35	1.09	41	44	91	22	5.6	2.7	4.1	76.3	7.2	41-1	7.9
BUCKEYE			DELTAPINE 120				86 PERCENT							
SLM	41	34	1.03	44	52	88	23	5.7	1.4	3.0	76.3	8.8	31-3	6.8
M	31	35	1.07	47	51	91	25	6.2	1.2	2.2	79.5	8.0	31-1	6.1
CASA GRANDE			DELTAPINE 61				90 PERCENT							
M	31	35	1.07	45	50	86	22	6.6	1.0	1.9	78.8	8.5	21-2	5.5
M	31	35	1.12	43	47	91	24	5.5	1.1	2.1	81.5	7.7	21-1	5.7
CASA GRANDE			DELTAPINE 732				84 PERCENT							
M	31	35	1.12	43	48	89	24	6.1	1.0	2.2	80.0	8.6	21-1	6.0
M	31	35	1.12	41	42	90	24	6.0	1.0	2.8	82.0	7.9	21-1	6.8
CHANDLER			DELTAPINE 61				90 PERCENT							
M	31	34	1.08	44	51	87	23	7.2	1.0	2.0	80.8	7.9	21-2	7.0
M	31	35	1.11	42	48	84	23	7.2	1.0	2.0	79.3	8.1	21-2	6.4
ELOY			DELTAPINE 41				100 PERCENT							
SLM	41	34	1.09	43	49	94	24	6.1	1.9	3.5	77.0	8.6	31-1	7.3
PARKER			STONEVILLE 825				100 PERCENT							
SLM	41	33	1.04	43	47	92	20	4.5	1.6	2.9	77.2	8.4	31-1	7.4
SLM	41	34	1.05	41	45	93	21	5.5	1.4	2.9	78.3	8.2	31-1	7.5
SOMERTON			DELTAPINE 61				96 PERCENT							
M	31	36	1.11	43	44	87	24	6.1	1.2	1.8	80.5	8.2	21-1	7.1
M	31	34	1.07	42	46	89	23	6.0	1.1	2.5	79.7	8.7	21-1	8.5 1/

1/ COTTON STUCK TO PROCESSING ROLLS.

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES									COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS			GRAY		BLEACHED		DYED	
GRADE		STAPLE	22s	50s	22s	50s	22s	50s	22s	50s	SPY NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
ARIZONA																	
BUCKEYE			DELTAPINE 55					93 PERCENT									
SLM	41	34	97	32	5.7	4.5	90	60	28	284	49	83.1	8.9	91.8	4.2	29.5	31.4
LM	51	35	93	28	5.5	3.8	110	70	24	42	46	83.2	8.5	92.2	3.8	27.8	32.3
BUCKEYE			DELTAPINE 120					86 PERCENT									
SLM	41	34	102	33	5.9	4.2	120	70	62	246	47	82.3	9.9	91.5	3.9	25.5	34.2
M	31	35	109	38	6.0	4.8	110	80	10	46	56	84.4	9.0	92.5	3.6	26.8	33.5
CASA GRANDE			DELTAPINE 61					90 PERCENT									
M	31	35	107	36	5.9	4.8	110	70	46	72	54	84.3	9.1	91.9	4.0	25.3	33.9
M	31	35	104	34	6.0	4.6	110	80	24	94	54	85.6	8.8	93.6	3.3	26.2	33.7
CASA GRANDE			DELTAPINE 732					84 PERCENT									
M	31	35	103	35	5.8	4.5	110	80	20	196	54	85.2	9.2	92.2	4.7	27.0	33.1
M	31	35	98	31	5.6	4.1	110	70	14	160	49	86.6	8.5	91.8	2.9	28.1	32.4
CHANDLER			DELTAPINE 61					90 PERCENT									
M	31	34	102	36	6.3	4.9	80	60	56	244	47	84.8	8.9	92.0	3.2	27.2	33.2
M	31	35	97	31	5.8	4.5	110	80	30	60	44	84.1	9.3	92.9	3.4	28.3	32.5
ELOY			DELTAPINE 41					100 PERCENT									
SLM	41	34	107	36	6.2	4.5	110	60	60	268	57	83.2	9.8	92.6	4.3	26.2	33.7
PARKER			STONEVILLE 825					100 PERCENT									
SLM	41	33	83	24[1]	5.0	3.9	100	80	26	118	40[3]	83.4	9.3	90.4	4.0	26.0	33.7
SLM	41	34	75	22[2]	4.4	4.0	90	70	40	162	25[3]	84.0	9.2	91.7	3.4	26.5	33.3
SOMERTON			DELTAPINE 61					96 PERCENT									
M	31	36	105	36	6.0	4.8	80	60	104	518	62	85.4	8.8	92.7	3.2	26.7	33.5
M	31	34	86	28	5.5	4.7	80	60	50	182	34	84.2	9.2	92.0	4.3	27.2	33.2

[1] END BREAKAGE TOO HIGH TO SPIN 50s YARN. 44s YARN SPUN AND STRENGTH ADJUSTED TO THE EQUIVALENT OF 50s.
[2] END BREAKAGE TOO HIGH TO SPIN 50s YARN. 36s YARN SPUN AND STRENGTH ADJUSTED TO THE EQUIVALENT OF 50s.
[3] THIS IS AN ESTIMATED VALUE BELOW THE RANGE OF THE TEST.

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
CALIFORNIA														
BAKERSFIELD			ACALA SJ-2				97 PERCENT							
M	31	35	1.09	45	44	102	25	5.7	1.4	2.4	79.7	8.2	21-2	6.9[1]
M	31	36	1.14	47	39	89	25	6.1	1.1	2.1	78.8	8.4	21-2	5.6[1]
BRAWLEY			DELTAPINE 61				100 PERCENT							
M	31	35	1.08	44	47	92	25	6.0	1.9	3.2	79.7	8.0	31-1	5.9[1]
M	31	35	1.07	43	42	88	23	6.0	1.2	2.4	79.5	7.5	31-1	6.8
BUTTONWILLOW			ACALA SJ-2				99 PERCENT							
M	31	35	1.09	45	45	102	27	5.6	0.8	2.0	78.3	9.3	21-3	5.1[1]
M	31	36	1.13	46	41	98	27	5.5	0.9	1.9	79.0	8.6	21-2	5.4[1]
CORCORAN			ACALA SJ-2				100 PERCENT							
M	31	35	1.10	46	44	101	26	5.2	1.2	2.2	79.5	8.6	21-2	6.6
M	31	35	1.11	45	37	98	28	5.6	1.2	2.2	79.5	8.5	21-2	6.1[1]
FIREBAUGH			ACALA SJ-2				100 PERCENT							
M	31	36	1.12	46	40	97	25	5.7	1.4	3.0	81.5	8.2	21-1	7.0
SLM PLUS	40	36	1.13	46	43	92	26	6.2	1.4	2.4	79.5	8.4	21-2	6.9
MENDOTA			ACALA SJ-2				100 PERCENT							
M	31	36	1.13	46	44	97	29	6.2	1.7	2.6	80.0	8.7	21-1	5.9[1]
SLM	41	36	1.15	46	45	96	27	6.2	2.2	3.3	78.8	8.9	21-2	6.6
ORANGE COVE			ACALA SJ-5				100 PERCENT							
SLM	41	36	1.13	46	44	97	27	5.6	1.4	2.5	80.0	8.2	21-2	6.3
M	31	36	1.13	45	39	101	27	6.0	1.1	2.1	80.3	9.0	11-2	5.5[1]
PIXLEY			ACALA SJ-5				85 PERCENT							
SLM	41	35	1.07	44	42	95	25	5.3	1.6	2.8	75.2	8.5	31-4	7.0[1]
SLM	41[2]	36	1.10	43	42	96	25	5.8	2.2	3.6	77.2	8.1	31-2	7.0

[1] COTTON STUCK TO PROCESSING ROLLS.
[2] REDUCED FROM 21 BECAUSE OF GRASS.

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES									COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE	: STAPLE		22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
CALIFORNIA																	
BAKERSFIELD			ACALA SJ-2					97 PERCENT									
M	31	35	129	45	6.0	4.8	70	60	204	564	68	84.0	9.8	91.3	3.7	27.7	33.1
M	31	36	121	44	6.4	5.2	110	70	60	134	72	82.8	9.5	91.4	4.2	27.7	32.3
BRAWLEY			DELTAPINE 61					100 PERCENT									
M	31	35	105	35	5.5	4.0	100	80	8	144	55	84.5	8.6	90.9	3.8	26.9	33.3
M	31	35	105	34	6.3	4.5	70	60	52	176	54	85.4	8.3	91.2	3.3	28.9	32.3
BUTTONWILLOW			ACALA SJ-2					99 PERCENT									
M	31	35	115	39	5.4	4.1	100	80	38	168	62	83.1	10.2	90.8	5.0	27.7	32.4
M	31	36	120	44	5.7	4.5	110	80	24	132	76	83.0	9.4	91.6	4.8	29.2	31.5
CORCORAN			ACALA SJ-2					100 PERCENT									
M	31	35	128	46	6.0	4.8	90	60	80	286	75	84.1	10.2	92.1	4.3	26.6	33.2
M	31	35	130	47	6.4	4.4	100	80	52	234	72	84.3	9.6	91.8	4.6	28.5	31.9
FIREBAUGH			ACALA SJ-2					100 PERCENT									
M	31	36	130	46	6.8	5.3	70	60	180	384	77	85.0	9.8	91.1	3.9	28.8	31.7
SLM PLUS	40	36	123	42	5.9	4.9	110	80	44	70	72	83.6	9.4	89.9	3.8	29.1	31.8
MENDOTA			ACALA SJ-2					100 PERCENT									
M	31	36	135	47	5.7	4.5	120	80	158	232	80	83.0	9.9	89.4	4.2	28.6	32.1
SLM	41	36	124	45	5.8	4.9	100	70	40	146	78	82.5	9.8	91.4	4.4	26.9	33.3
ORANGE COVE			ACALA SJ-5					100 PERCENT									
SLM	41	36	136	51	6.5	5.5	80	70	206	432	89	84.3	9.7	92.7	4.0	26.5	33.3
M	31	36	134	49	6.5	5.3	100	80	34	124	83	84.6	9.8	91.8	4.8	28.1	32.4
PIXLEY			ACALA SJ-5					85 PERCENT									
SLM	41	35	116	40	5.7	4.3	70	60	590	582	61	81.7	9.5	92.2	4.5	28.1	32.0
SLM	41 1/	36	114	40	5.6	4.2	100	80	70	362	66	81.9	9.4	91.7	4.7	28.1	32.2

1/ REDUCED FROM 21 BECAUSE OF GRASS.

TABLE 6.-- CONTINUED

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRO-	FIBER STRENGTH		1/8" ELON-	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.	NAIRE	ZERO GAGE	1/8" GAGE	GATION	VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
CALIFORNIA														
STRATHMORE		ACALA SJ-5					97 PERCENT							
SLM LT SP	42	36	1.12	45	44	98	26	5.7	1.5	2.6	78.5	8.1	31-1	5.7[1]
SLM	41	36	1.12	46	45	101	26	5.5	1.3	2.0	76.2	7.8	31-2	5.9
THREE ROCKS		ACALA SJ-2					100 PERCENT							
SLM	41	35	1.12	46	43	96	26	6.0	2.7	3.7	78.8	8.6	21-2	7.3
SLM	41	36	1.13	46	42	95	26	6.3	1.4	2.4	75.7	8.4	31-4	6.4
VISALIA		ACALA SJ-5					98 PERCENT							
SLM	41	36	1.12	46	45	102	27	5.2	1.4	2.3	79.0	8.3	21-2	6.5
SLM	41	36	1.11	46	41	94	26	6.1	1.6	2.8	77.3	8.1	31-2	6.0
WEST TEXAS														
DELL CITY		MCNAIR 220					70 PERCENT							
SLM	41	35	1.07	44	40	82	22	7.3	1.6	2.4	79.2	8.2	21-2	7.5
M	31	35	1.07	45	37	85	24	6.5	1.2	2.4	79.5	9.1	21-1	6.5

[1] COTTON STUCK TO PROCESSING ROLLS.

TABLE 6.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE		STAPLE	22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
CALIFORNIA																	
STRATHMORE			ACALA SJ-5					97 PERCENT									
SLM LT SP	42	36	125	44	5.7	4.7	90	70	70	172	62	83.0	9.4	89.3	3.5	27.0	32.8
SLM	41	36	124	45	5.6	4.7	100	80	72	122	74	81.8	9.0	89.9	5.8	28.6	31.3
THREE ROCKS			ACALA SJ-2					100 PERCENT									
SLM	41	35	125	46	6.1	5.0	90	80	40	198	71	83.4	10.0	91.0	4.3	26.6	33.1
SLM	41	36	119	42	6.3	4.8	110	80	56	86	74	82.2	9.2	92.2	4.1	28.0	32.4
VISALIA			ACALA SJ-5					98 PERCENT									
SLM	41	36	135	51	6.0	4.8	90	60	178	692	79	82.7	9.9	92.1	4.7	27.1	32.1
SLM	41	36	118	44	6.2	4.8	100	70	38	176	67	82.5	9.3	91.0	4.4	28.0	32.4
WEST TEXAS																	
DELL CITY			MCNAIR 220					70 PERCENT									
SLM	41	35	105	36	6.5	5.1	90	60	64	298	61	84.5	9.7	93.2	3.7	28.8	32.4
M	31	35	106	35	6.3	4.5	110	60	10	62	53	84.5	10.0	94.4	4.9	27.3	33.1

TABLE 7.--COTTON: AMERICAN UPLAND LONG STAPLE FIBER AND YARN QUALITY CHARACTERISTICS BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1981.

PRODUCTION AREA AND CLASSIFICATION			FIBER LENGTH		MICRO-	FIBER STRENGTH		1/8" ELON-	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD
GRADE	STAPLE		2.5% SPAN	50/2.5 UNIF.	NAIRE	ZERO GAGE	1/8" GAGE	GATION	VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE	WASTE
NAME	CODE	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.
GEORGIA														
MADISON		COKER 310				100 PERCENT								
SLM LT SP	42	35	1.11	45	50	85	24	5.7	2.4	3.5	75.5	10.2	22-2	8.2
SLM	41	35	1.12	44	44	83	22	6.0	2.3	3.8	75.8	8.3	31-2	7.5
NORTH CAROLINA														
DUNN		COKER 310				87 PERCENT								
SLM	41	35	1.12	45	43	80	23	6.1	1.8	3.1	76.0	8.6	31-4	6.7
SLM	41	36	1.13	45	46	86	23	6.3	1.7	2.6	76.5	8.6	31-3	7.5
SOUTH CAROLINA														
TATUM		COKER 310				70 PERCENT								
SLM	41	35	1.11	44	46	84	24	5.8	2.2	3.2	74.0	9.1	31-4	8.2
SLM	41	36	1.11	44	44	80	24	7.5	1.8	2.7	77.7	8.7	31-1	8.0
NEW MEXICO														
MESQUITE		ACALA 1517-75				80 PERCENT								
M LT SP	32	38	1.18	46	38	91	25	6.6	1.4	2.3	76.7	9.5	21-4	7.3
SLM	41	37	1.19	45	38	91	26	6.0	1.8	2.8	80.5	8.0	21-2	7.7

TABLE 7.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION			YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER					
			STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
GRADE	: STAPLE		22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
NAME	CODE	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
GEORGIA																	
MADISON			COKER 310					100 PERCENT									
SLM LT SP	42	35	103	34	5.7	4.2	120	90	18	110	62	77.7	10.7	91.5	4.8	24.2	34.4
SLM	41	35	97	31	5.5	3.9	130	90	18	114	56	80.0	9.5	91.3	4.6	28.6	32.1
NORTH CAROLINA																	
DUNN			COKER 310					87 PERCENT									
SLM	41	35	108	37	6.1	5.2	110	80	40	158	67	77.3	9.5	91.6	5.0	25.3	34.1
SLM	41	36	113	41	6.5	5.0	110	80	12	176	74	81.4	9.9	92.6	4.2	26.9	33.2
SOUTH CAROLINA																	
TATUM			COKER 310					70 PERCENT									
SLM	41	35	104	33	5.5	4.4	100	80	42	226	61	79.3	10.4	92.5	4.1	25.3	34.1
SLM	41	36	97	33	7.7	6.7	100	60	40	228	60	82.7	10.0	93.7	3.9	27.1	33.5
NEW MEXICO																	
MESQUITE			ACALA 1517-75					80 PERCENT									
M LT SP	32	38	137	49	6.5	5.2	100	70	14	128	82	82.0	9.7	92.1	5.0	27.9	32.4
SLM	41	37	128	46	6.0	5.0	90	70	24	112	78	85.1	9.3	91.6	4.2	28.3	32.5

TABLE 7A.--COTTON: AMERICAN UPLAND LONG STAPLE COMBED YARN QUALITY CHARACTERISTICS BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1981.

PRODUCTION AREA AND CLASSIFICATION			COMBER WASTE	YARN SKEIN STRENGTH			YARN ELONGATION		YARN APPEARANCE			YARN NEPS	
				22s	50s	AVERAGE BREAK FACTOR	22s	50s	22s	50s	AVERAGE	22s	50s
NAME	CODE	32ND IN.	PCT.	LBS.	LBS.	NO.	PCT.	PCT.	INDEX	INDEX	INDEX	NO.	NO.
GEORGIA													
MADISON			COKER 310			100 PERCENT							
SLM LT SP	42	35	15.2	121	43	2406	6.1	4.9	130	110	120	28	10
SLM	41	35	18.4	119	41	2334	6.0	4.9	130	120	125	12	76
NORTH CAROLINA													
DUNN			COKER 310			87 PERCENT							
SLM	41	35	15.9	127	46	2547	6.5	5.6	120	110	115	40	146
SLM	41	36	15.4	129	47	2594	6.8	5.5	130	120	125	32	10
SOUTH CAROLINA													
TATUM			COKER 310			70 PERCENT							
SLM	41	35	17.8	123	43	2428	5.8	4.9	120	110	115	50	272
SLM	41	36	16.9	120	43	2395	7.0	5.6	130	90	110	36	292
NEW MEXICO													
MESQUITE			ACALA 1517-75			80 PERCENT							
M LT SP	32	38	15.3	155	58	3155	6.9	5.6	130	90	110	36	12
SLM	41	37	16.7	147	53	2942	7.0	5.7	110	100	105	12	46

TABLE 8.--COTTON: AMERICAN PIMA EXTRA LONG STAPLE FIBER AND YARN QUALITY CHARACTERISTICS BY PRODUCTION AREA AND CLASSIFICATION, CROP OF 1981.

PRODUCTION AREA AND CLASSIFICATION		ARRAY			FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK			PICKER & CARD WASTE	COMBER WASTE
GRADE	STAPLE	UPPER QUARTILE LENGTH	COEFF. OF VAR.	MICRONAIRE	ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	COLOR CODE		
NAME	32ND IN.	IN.	PCT.	RDG.	MPSI	G/TEX	PCT.	PCT.	PCT.	PCT.	UNITS	NO.	PCT.	PCT.
ARIZONA														
CASA GRANDE		PIMA S-5				100 PERCENT								
3	46	1.48	32	40	101	36	7.0	1.1	2.1	71.0	11.3	-	6.4	14.0
3	46	1.50	29	40	102	36	8.2	1.1	2.3	73.2	10.4	-	6.8	16.1
SAFFORD		PIMA S-5				100 PERCENT								
4	46	1.48	32	42	101	35	8.5	1.0	1.9	69.0	11.9	-	7.6	14.1
4	46	1.48	29	40	103	33	8.3	1.5	2.7	69.0	11.8	-	7.6	15.1
WENDEN		PIMA S-5				97 PERCENT								
3	46	1.49	30	38	106	34	7.1	1.2	2.2	71.8	10.7	-	7.1	15.5
3	46	1.49	31	41	103	34	7.4	1.0	2.0	70.0	10.6	-	6.3	15.1
NEW MEXICO														
MESQUITE		PIMA S-5				100 PERCENT								
3	46	1.48	32	35	100	34	8.0	0.8	2.3	70.3	11.7	-	6.5	14.7
3	46	1.49	32	34	103	35	8.3	1.1	2.1	69.8	11.5	-	6.8	14.9
WEST TEXAS														
EL PASO		PIMA S-5				100 PERCENT								
4	46	1.51	36	33	99	32	7.6	1.8	3.2	68.7	12.3	-	7.9	14.6
4	46	1.46	36	34	100	33	7.2	2.1	3.3	68.0	12.6	-	8.5	14.1
TORNILLO		PIMA S-5				100 PERCENT								
4	46	1.44	34	28	99	32	7.8	1.6	3.1	68.8	11.8	-	7.9	16.3
3	46	1.46	31	33	101	34	7.4	1.3	2.6	69.0	11.4	-	7.1	15.0

TABLE 8.--CONTINUED

PRODUCTION AREA AND CLASSIFICATION		YARN PROPERTIES								COLOR OF FINISHER DRAWING SLIVER					
		STRENGTH		ELONGATION		APPEARANCE		NEPS		GRAY		BLEACHED		DYED	
GRADE : STAPLE		50s	80s	50s	80s	50s	80s	50s	80s	Rd	+b	Rd	+b	Rd	-b
NAME	32ND IN.	LBS.	LBS.	PCT.	PCT.	INDEX	INDEX	NO.	NO.	PCT.	UNITS	PCT.	UNITS	PCT.	UNITS
ARIZONA															
CASA GRANDE		PIMA S-5					100 PERCENT								
3	46	69	36	5.6	4.8	120	120	8	22	75.9	12.0	91.2	6.7	28.1	31.3
3	46	66	35	5.4	4.6	120	110	24	10	80.1	11.2	91.6	5.8	29.2	30.9
SAFFORD		PIMA S-5					100 PERCENT								
4	46	66	35	5.6	5.0	130	130	6	14	74.7	12.6	90.4	7.1	27.7	31.4
4	46	66	34	5.2	4.8	120	100	8	42	75.0	12.3	92.4	6.6	27.6	32.0
WENDEN		PIMA S-5					97 PERCENT								
3	46	67	35	5.4	4.7	110	110	26	14	77.6	12.1	90.3	5.9	28.1	31.7
3	46	65	35	5.6	4.8	130	120	2	12	76.7	12.2	90.3	6.4	27.9	31.1
NEW MEXICO															
MESQUITE		PIMA S-5					100 PERCENT								
3	46	69	36	5.7	5.2	110	110	8	22	74.9	12.2	90.7	6.3	27.9	31.3
3	46	69	35	5.7	5.0	110	100	4	28	75.8	12.4	88.9	6.4	28.0	30.9
WEST TEXAS															
EL PASO		PIMA S-5					100 PERCENT								
4	46	68	35	5.5	5.0	110	110	12	26	73.8	12.9	90.9	6.3	28.6	30.8
4	46	67	34	5.7	5.2	110	100	4	18	75.0	12.6	89.6	6.5	29.4	29.9
TORNILLO		PIMA S-5					100 PERCENT								
4	46	68	35	5.7	5.0	100	90	6	38	74.9	12.5	90.9	6.4	28.9	30.5
3	46	70	36	6.0	5.0	100	90	4	36	73.3	12.4	89.5	6.6	29.6	29.6

TABLE 9.--COTTON: MEANS AND STANDARD DEVIATIONS OF TEST MEASUREMENTS PERFORMED ON 247 SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1981.

TEST ITEM	58 SHORT STAPLE SAMPLES		169 MEDIUM STAPLE SAMPLES		8 LONG STAPLE SAMPLES		12 EXTRA LONG STAPLE SAMPLES	
	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
FIBER PROPERTIES:								
CLASSIFICATION:								
GRADE ---------- INDEX	84.3	7.7	91.1	6.7	93.8	2.2	-	-
STAPLE ---------- 32ND IN.	31.4	0.7	34.6	1.1	35.9	1.1	46.0	0.0
FIBER LENGTH:								
2.5% SPAN ---------- IN.	0.983	0.026	1.083	0.039	1.134	0.032	1.359	0.022
50/2.5 UNIF. ---------- PCT.	43.9	1.3	44.2	1.4	44.8	0.7	46.2	1.1
UPPER QUARTILE LENGTH -- IN.	-	-	-	-	-	-	1.480	0.019
COEFF. OF VAR. -------- PCT.	-	-	-	-	-	-	32.0	2.3
MICRONAIRE ---------- RDG.	37.4	5.3	44.5	5.5	43.6	4.1	36.5	4.3
FIBER STRENGTH:								
ZERO GAGE ---------- MPSI	83.3	4.3	87.4	5.9	85.0	4.3	101.5	2.0
1/8" GAGE ---------- G/TEX	21.6	1.2	23.4	1.7	23.9	1.2	34.0	1.3
ELONGATION (1/8") ----- PCT.	6.83	0.90	6.04	0.78	6.25	0.58	7.73	0.52
SHIRLEY ANALYZER:								
VISIBLE WASTE --------- PCT.	3.25	1.19	2.22	0.99	1.92	0.34	1.30	0.38
TOTAL WASTE ---------- PCT.	4.65	1.34	3.23	1.11	3.00	0.50	2.48	0.49
COLOR OF RAW STOCK								
GRAYNESS (Rd) --------- PCT.	72.74	2.37	75.72	3.03	76.59	1.91	69.88	1.49
YELLOWNESS (+b) ------ UNITS	9.41	0.58	8.70	0.95	8.88	0.70	11.50	0.67

TABLE 9.--CONTINUED

TEST ITEM	58 SHORT STAPLE SAMPLES		169 MEDIUM STAPLE SAMPLES		8 LONG STAPLE SAMPLES		12 EXTRA LONG STAPLE SAMPLES	
	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
MANUFACTURING WASTE:								
TOTAL WASTE ---------- PCT.	8.08	1.56	7.36	1.15	7.64	0.51	7.21	0.69
COMBER WASTE ---------- PCT.	-	-	-	-	16.45	1.21	14.96	0.74
CARDED YARN DATA:								
YARN SKEIN STRENGTH:								
8s (74 TEX) ---------- LBS.	293.2	17.7	-	-	-	-		
22s (27 TEX) ---------- LBS.	94.6	5.0	107.0	11.3	110.9	14.6		
50s (12 TEX) ---------- LBS.	-	-	36.3	5.3	38.0	6.7		
YARN ELONGATION:								
8s (74 TEX) ---------- PCT.	7.70	0.59	-	-	-	-		
22s (27 TEX) ---------- PCT.	6.86	0.60	6.10	0.52	6.19	0.73		
50s (12 TEX) ---------- PCT.	-	-	4.75	0.45	4.95	0.86		
YARN APPEARANCE:								
8s (74 TEX) --------- INDEX	107.9	13.6	-	-	-	-		
22s (27 TEX) --------- INDEX	103.6	16.4	94.9	15.0	107.5	12.8		
50s (12 TEX) --------- INDEX	-	-	68.8	8.6	77.5	10.4		
YARN NEPS:								
8s (74 TEX) ---------- NO.	10.4	12.2	-	-	-	-		
22s (27 TEX) ---------- NO.	35.7	25.6	77.2	57.2	26.0	12.6		
50s (12 TEX) ---------- NO.	-	-	263.9	133.2	156.5	49.4		
SPINNING POTENTIAL ------- NO.	50.2	4.8	59.9	11.0	67.5	9.4		

TABLE 9.--CONTINUED

TEST ITEM	58 SHORT STAPLE SAMPLES MEAN	58 SHORT STAPLE SAMPLES STANDARD DEVIATION	169 MEDIUM STAPLE SAMPLES MEAN	169 MEDIUM STAPLE SAMPLES STANDARD DEVIATION	8 LONG STAPLE SAMPLES MEAN	8 LONG STAPLE SAMPLES STANDARD DEVIATION	12 EXTRA LONG STAPLE SAMPLES MEAN	12 EXTRA LONG STAPLE SAMPLES STANDARD DEVIATION
COMBED YARN DATA:								
YARN SKEIN STRENGTH:								
22s (27 TEX) ---------- LBS.					130.1	13.5	-	-
50s (12 TEX) ---------- LBS.					46.8	5.9	67.5	1.6
80s (7.4 TEX) --------- LBS.					-	-	35.1	0.7
YARN ELONGATION:								
22s (27 TEX) ---------- PCT.					6.51	0.49	-	-
50s (12 TEX) ---------- PCT.					5.34	0.37	5.59	0.20
80s (7.4 TEX) --------- PCT.					-	-	4.92	0.19
YARN APPEARANCE:								
22s (27 TEX) --------- INDEX					125.0	7.6	-	-
50s (12 TEX) --------- INDEX					106.2	11.9	114.2	10.0
80s (7.4 TEX) -------- INDEX					-	-	107.5	12.2
YARN NEPS:								
22s (27 TEX) ---------- NO.					30.8	13.2	-	-
50s (12 TEX) ---------- NO.					108.0	116.8	9.3	7.8
80s (7.4 TEX) ---------- NO.					-	-	23.5	10.7
COLOR OF FINISHER DRAWING SLIVER:								
GRAY:								
REFLECTANCE (Rd) ------ PCT.	78.39	2.42	79.56	3.68	80.69	2.63	75.64	1.82
YELLOWNESS (+b) ------ UNITS	10.46	0.52	9.58	0.59	9.88	0.48	12.28	0.42
BLEACHED:								
REFLECTANCE (Rd) ------ PCT.	91.29	0.84	92.04	1.81	92.11	0.80	90.56	0.96
YELLOWNESS (+b) ------ UNITS	4.90	0.52	4.34	0.53	4.48	0.43	6.42	0.34
DYED:								
REFLECTANCE (Rd) ------ PCT.	28.30	1.44	27.52	1.67	26.70	1.60	28.42	0.70
BLUENESS (-b) -------- UNITS	31.89	0.96	32.60	1.11	33.29	0.88	30.95	0.69

TABLE 10.--COTTON: SIMPLE CORRELATION ANALYSIS FOR FIBER AND PROCESSING TEST RESULTS FROM 58 SHORT STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1981.

TEST ITEM	CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK		PICKER & CARD WASTE
	GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	
	SIMPLE CORRELATION COEFFICIENTS (r's)												
CLASSIFICATION:													
GRADE ---------- INDEX	+1.00	-.20	-.34	+.10	+.52	+.30	-.37	-.31	-.87	-.88	+.56	-.07	-.83
STAPLE -------- 32ND IN.	-.20	+1.00	+.64	-.10	-.23	-.03	+.35	+.25	+.21	+.23	-.05	-.01	+.13
FIBER LENGTH:													
2.5% SPAN ---------- IN.	-.34	+.64	+1.00	-.20	-.50	-.12	+.52	+.27	+.38	+.42	-.14	-.19	+.26
50/2.5 UNIF. ------ PCT.	+.10	-.10	-.20	+1.00	+.33	-.05	-.18	+.12	-.06	-.07	+.16	-.17	-.23
MICRONAIRE ---------- RDG.	+.52	-.23	-.50	+.33	+1.00	+.44	-.29	-.40	-.48	-.54	+.19	-.11	-.53
FIBER STRENGTH:													
ZERO GAGE --------- MPSI	+.30	-.03	-.12	-.05	+.44	+1.00	+.32	-.71	-.20	-.30	+.27	-.16	-.35
1/8" GAGE -------- G/TEX	-.37	+.35	+.52	-.18	-.29	+.32	+1.00	+.04	+.42	+.37	-.08	-.22	+.23
ELONGATION (1/8") - PCT.	-.31	+.25	+.27	+.12	-.40	-.71	+.04	+1.00	+.23	+.31	-.18	-.06	+.30
SHIRLEY ANALYZER:													
VISIBLE WASTE ----- PCT.	-.87	+.21	+.38	-.06	-.48	-.20	+.42	+.23	+1.00	+.95	-.44	+.07	+.78
TOTAL WASTE ------- PCT.	-.88	+.23	+.42	-.07	-.54	-.30	+.37	+.31	+.95	+1.00	-.54	+.08	+.79
COLOR OF RAW STOCK:													
GRAYNESS (Rd) ----- PCT.	+.56	-.05	-.14	+.16	+.19	+.27	-.08	-.18	-.44	-.54	+1.00	-.32	-.61
YELLOWNESS (+b) -- UNITS	-.07	-.01	-.19	-.17	-.11	-.16	-.22	-.06	+.07	+.08	-.32	+1.00	+.24
PICKER AND CARD WASTE ---------- PCT.	-.83	+.13	+.26	-.23	-.53	-.35	+.23	+.30	+.78	+.79	-.61	+.24	+1.00
YARN STRENGTH:													
8s (74 TEX) ------ LBS.	-.32	+.32	+.29	-.06	-.16	+.15	+.55	+.21	+.33	+.31	-.08	-.09	+.28
22s (27 TEX) ------ LBS.	-.17	+.40	+.29	+.04	-.06	+.39	+.67	-.01	+.24	+.19	+.10	-.30	+.03
YARN ELONGATION:													
8s (74 TEX) ------ PCT.	-.47	+.18	+.37	-.05	-.65	-.58	+.22	+.65	+.45	+.50	-.18	-.09	+.53
22s (27 TEX) ------ PCT.	-.42	+.09	+.33	-.06	-.60	-.62	+.21	+.69	+.41	+.46	-.14	-.05	+.46
YARN APPEARANCE:													
8s (74 TEX) ----- INDEX	+.54	-.14	-.15	+.29	+.52	+.33	-.16	-.41	-.41	-.47	+.42	-.09	-.67
22s (27 TEX) ----- INDEX	+.54	-.01	-.13	+.28	+.52	+.36	-.19	-.34	-.42	-.47	+.40	-.16	-.66
YARN NEPS:													
8s (74 TEX) ------- NO.	-.48	-.04	+.04	-.04	-.35	-.36	+.13	+.36	+.41	+.44	-.43	+.16	+.64
22s (27 TEX) ------- NO.	-.54	+.21	+.19	-.17	-.34	-.26	+.33	+.39	+.44	+.45	-.36	+.03	+.62
SPINNING POTENTIAL --- NO.	-.36	+.26	+.35	-.00	-.35	-.17	+.47	+.40	+.45	+.47	-.23	-.14	+.27
COLOR OF FINISHER DRAWING SLIVER:													
GRAY:													
REFLECTANCE (Rd) - PCT.	+.37	+.11	+.13	+.37	-.03	-.02	+.04	+.22	-.24	-.25	+.70	-.51	-.41
YELLOWNESS (+b) - UNITS	-.34	-.07	-.12	-.07	-.25	-.18	-.11	+.10	+.25	+.28	-.42	+.71	+.43
BLEACHED:													
REFLECTANCE (Rd) - PCT.	+.03	+.15	+.23	-.12	-.19	-.02	+.11	+.07	+.07	+.05	+.25	-.07	+.09
YELLOWNESS (+b) - UNITS	-.19	+.10	-.17	-.04	+.19	+.14	+.05	-.13	+.10	+.10	-.28	+.22	+.20
DYED:													
REFLECTANCE (Rd) - PCT.	-.38	+.27	+.30	-.32	-.38	-.22	+.24	+.31	+.37	+.44	-.25	-.04	+.42
BLUENESS (-b) --- UNITS	+.38	-.29	-.30	+.24	+.35	+.18	-.23	-.33	-.34	-.44	+.35	-.03	-.39

TABLE 10.--CONTINUED

TEST ITEM	YARN PROPERTIES									COLOR FINISHER DRAWING SLIVER					
	STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY NO.	GRAY		BLEACHED		DYED	
	8s	22s	8s	22s	8s	22s	8s	22s		Rd	+b	Rd	+b	Rd	-b
	SIMPLE CORRELATION COEFFICIENTS (r's)														
CLASSIFICATION:															
GRADE ---------- INDEX	-.32	-.17	-.47	-.42	+.54	+.54	-.48	-.54	-.36	+.37	-.34	+.03	-.19	-.38	+.38
STAPLE -------- 32ND IN.	+.32	+.40	+.18	+.09	-.14	-.01	-.04	+.21	+.26	+.11	-.07	+.15	+.10	+.27	-.29
FIBER LENGTH:															
2.5% SPAN ---------- IN.	+.29	+.29	+.37	+.33	-.15	-.13	+.04	+.19	+.35	+.13	-.12	+.23	-.17	+.30	-.30
50/2.5 UNIF. ------ PCT.	-.06	+.04	-.05	-.06	+.29	+.28	-.04	-.17	-.00	+.37	-.07	-.12	-.04	-.32	+.24
MICRONAIRE ---------- RDG.	-.16	-.06	-.65	-.60	+.52	+.52	-.35	-.34	-.35	-.03	-.25	-.19	+.19	-.38	+.35
FIBER STRENGTH:															
ZERO GAGE --------- MPSI	+.15	+.39	-.58	-.62	+.33	+.36	-.36	-.26	-.17	-.02	-.18	-.02	+.14	-.22	+.18
1/8" GAGE -------- G/TEX	+.55	+.67	+.22	+.21	-.16	-.19	+.13	+.33	+.47	+.04	-.11	+.11	+.05	+.24	-.23
ELONGATION (1/8") - PCT.	+.21	-.01	+.65	+.69	-.41	-.34	+.36	+.39	+.40	+.22	+.10	+.07	-.13	+.31	-.33
SHIRLEY ANALYZER:															
VISIBLE WASTE ----- PCT.	+.33	+.24	+.45	+.41	-.41	-.42	+.41	+.44	+.45	-.24	+.25	+.07	+.10	+.37	-.34
TOTAL WASTE ------- PCT.	+.31	+.19	+.50	+.46	-.47	-.47	+.44	+.45	+.47	-.25	+.28	+.05	+.10	+.44	-.44
COLOR OF RAW STOCK:															
GRAYNESS (Rd) ----- PCT.	-.08	+.10	-.18	-.14	+.42	+.40	-.43	-.36	-.23	+.70	-.42	+.25	-.28	-.25	+.35
YELLOWNESS (+b) -- UNITS	-.09	-.30	-.09	-.05	-.09	-.16	+.16	+.03	-.14	-.51	+.71	-.07	+.22	-.04	-.03
PICKER AND CARD WASTE ---------- PCT.	+.28	+.03	+.53	+.46	-.67	-.66	+.64	+.62	+.27	-.41	+.43	+.09	+.20	+.42	-.39
YARN STRENGTH:															
8s (74 TEX) ------ LBS.	+1.00	+.68	+.28	+.28	-.31	-.20	+.28	+.31	+.56	+.01	+.10	+.22	+.34	+.39	-.36
22s (27 TEX) ------ LBS.	+.68	+1.00	+.06	+.06	-.18	-.03	+.10	+.13	+.63	+.16	-.20	+.21	+.15	+.28	-.31
YARN ELONGATION:															
8s (74 TEX) ------ PCT.	+.28	+.06	+1.00	+.89	-.50	-.49	+.46	+.44	+.46	+.24	+.08	+.22	-.12	+.40	-.35
22s (27 TEX) ------ PCT.	+.28	+.06	+.89	+1.00	-.51	-.50	+.48	+.36	+.50	+.21	+.14	+.28	-.14	+.43	-.41
YARN APPEARANCE:															
8s (74 TEX) ----- INDEX	-.31	-.18	-.50	-.51	+1.00	+.85	-.77	-.69	-.29	+.23	-.31	-.12	-.20	-.53	+.55
22s (27 TEX) ----- INDEX	-.20	-.03	-.49	-.50	+.85	+1.00	-.72	-.71	-.26	+.24	-.32	-.08	-.21	-.33	+.36
YARN NEPS:															
8s (74 TEX) ------- NO.	+.28	+.10	+.46	+.48	-.77	-.72	+1.00	+.75	+.29	-.20	+.35	+.14	+.19	+.41	-.42
22s (27 TEX) ------- NO.	+.31	+.13	+.44	+.36	-.69	-.71	+.75	+1.00	+.17	-.18	+.26	+.03	+.22	+.46	-.46
SPINNING POTENTIAL --- NO.	+.56	+.63	+.46	+.50	-.29	-.26	+.29	+.17	+1.00	+.08	+.00	+.15	+.07	+.39	-.43
COLOR OF FINISHER DRAWING SLIVER:															
GRAY:															
REFLECTANCE (Rd) - PCT.	+.01	+.16	+.24	+.21	+.23	+.24	-.20	-.18	+.08	+1.00	-.49	+.19	-.40	-.17	+.20
YELLOWNESS (+b) - UNITS	+.10	-.20	+.08	+.14	-.31	-.32	+.35	+.26	+.00	-.49	+1.00	-.00	+.37	+.17	-.27
BLEACHED:															
REFLECTANCE (Rd) - PCT.	+.22	+.21	+.22	+.28	-.12	-.08	+.14	+.03	+.15	+.19	-.00	+1.00	-.21	+.05	+.05
YELLOWNESS (+b) - UNITS	+.34	+.15	-.12	-.14	-.20	-.21	+.19	+.22	+.07	-.40	+.37	-.21	+1.00	+.33	-.38
DYED:															
REFLECTANCE (Rd) - PCT.	+.39	+.28	+.40	+.43	-.53	-.33	+.41	+.46	+.39	-.17	+.17	+.05	+.33	+1.00	-.93
BLUENESS (-b) --- UNITS	-.36	-.31	-.35	-.41	+.55	+.36	-.42	-.46	-.43	+.20	-.27	+.05	-.38	-.93	+1.00

TABLE 11.--COTTON: SIMPLE CORRELATION ANALYSIS FOR FIBER AND PROCESSING TEST RESULTS FROM 169 MEDIUM STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1981.

TEST ITEM	CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK		PICKER & CARD WASTE
	GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	
	SIMPLE CORRELATION COEFFICIENTS (r's)												
CLASSIFICATION:													
GRADE ---------- INDEX	+1.00	+.36	+.26	+.19	+.37	+.39	+.36	-.16	-.83	-.83	+.77	-.24	-.74
STAPLE -------- 32ND IN.	+.36	+1.00	+.84	+.26	+.10	+.40	+.51	-.13	-.25	-.28	+.35	-.37	-.33
FIBER LENGTH:													
2.5% SPAN ---------- IN.	+.26	+.84	+1.00	+.25	+.08	+.29	+.50	-.16	-.13	-.19	+.29	-.33	-.26
50/2.5 UNIF. ------ PCT.	+.19	+.26	+.25	+1.00	+.26	+.28	+.39	-.09	-.12	-.17	+.08	-.01	-.22
MICRONAIRE ---------- RDG.	+.37	+.10	+.08	+.26	+1.00	+.35	+.13	-.42	-.32	-.42	+.08	-.07	-.19
FIBER STRENGTH:													
ZERO GAGE --------- MPSI	+.39	+.40	+.29	+.28	+.35	+1.00	+.71	-.54	-.34	-.33	+.28	-.13	-.32
1/8" GAGE -------- G/TEX	+.36	+.51	+.50	+.39	+.13	+.71	+1.00	-.20	-.31	-.32	+.31	-.05	-.41
ELONGATION (1/8") - PCT.	-.16	-.13	-.16	-.09	-.42	-.54	-.20	+1.00	+.09	+.15	-.05	+.12	-.01
SHIRLEY ANALYZER:													
VISIBLE WASTE ----- PCT.	-.83	-.25	-.13	-.12	-.32	-.34	-.31	+.09	+1.00	+.95	-.62	+.14	+.78
TOTAL WASTE ------- PCT.	-.83	-.28	-.19	-.17	-.42	-.33	-.32	+.15	+.95	+1.00	-.58	+.14	+.78
COLOR OF RAW STOCK:													
GRAYNESS (Rd) ----- PCT.	+.77	+.35	+.29	+.08	+.08	+.28	+.31	-.05	-.62	-.58	+1.00	-.28	-.54
YELLOWNESS (+b) -- UNITS	-.24	-.37	-.33	-.01	-.07	-.13	-.05	+.12	+.14	+.14	-.28	+1.00	+.15
PICKER AND CARD WASTE ---------- PCT.	-.74	-.33	-.26	-.22	-.19	-.32	-.41	-.01	+.78	+.78	-.54	+.15	+1.00
YARN STRENGTH:													
22s (27 TEX) ------ LBS.	+.24	+.58	+.67	+.51	-.04	+.42	+.72	-.09	-.13	-.19	+.27	-.16	-.32
50s (12 TEX) ------ LBS.	+.18	+.63	+.72	+.49	-.09	+.39	+.72	-.06	-.07	-.12	+.25	-.14	-.28
YARN ELONGATION:													
22s (27 TEX) ------ PCT.	-.20	+.13	+.19	+.03	-.55	-.49	-.10	+.62	+.22	+.23	+.02	+.01	+.06
50s (12 TEX) ------ PCT.	-.16	+.26	+.34	+.15	-.44	-.35	+.06	+.52	+.22	+.20	+.06	-.01	+.04
YARN APPEARANCE:													
22s (27 TEX) ----- INDEX	+.22	-.04	-.06	+.19	+.29	+.17	+.12	+.04	-.24	-.23	+.07	-.03	-.34
50s (12 TEX) ----- INDEX	+.20	+.05	+.11	+.15	+.29	+.32	+.31	-.09	-.17	-.21	+.00	-.03	-.28
YARN NEPS:													
22s (27 TEX) ------- NO.	-.01	+.19	+.17	+.14	+.09	+.12	+.12	-.23	+.07	+.02	-.04	-.06	+.11
50s (12 TEX) ------- NO.	-.09	+.19	+.20	+.03	+.12	+.09	+.08	-.24	+.16	+.09	-.10	+.00	+.20
SPINNING POTENTIAL --- NO.	+.02	+.58	+.69	+.39	-.25	+.18	+.56	+.01	+.07	+.00	+.12	-.06	-.17
COLOR OF FINISHER DRAWING SLIVER:													
GRAY:													
REFLECTANCE (Rd) - PCT.	+.55	+.38	+.25	+.13	-.00	+.29	+.26	+.16	-.50	-.39	+.76	-.28	-.46
YELLOWNESS (+b) - UNITS	-.34	-.42	-.35	+.12	-.28	-.14	-.10	+.18	+.29	+.33	-.24	+.48	+.29
BLEACHED:													
REFLECTANCE (Rd) - PCT.	-.10	+.04	+.15	-.08	-.14	-.30	-.12	+.04	+.18	+.12	-.01	-.06	+.14
YELLOWNESS (+b) - UNITS	-.22	-.11	-.03	+.17	-.02	+.04	+.08	-.17	+.20	+.12	-.30	+.30	+.18
DYED:													
REFLECTANCE (Rd) - PCT.	-.31	-.02	+.04	-.19	-.59	-.24	-.13	+.17	+.22	+.26	-.14	+.01	+.20
BLUENESS (-b) --- UNITS	+.39	+.07	-.01	+.17	+.63	+.24	+.14	-.13	-.29	-.33	+.22	-.08	-.25

TABLE 11.--CONTINUED

TEST ITEM	YARN PROPERTIES									COLOR FINISHER DRAWING SLIVER					
	STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY	GRAY		BLEACHED		DYED	
	22s	50s	22s	50s	22s	50s	22s	50s	NO.	Rd	+b	Rd	+b	Rd	-b
	SIMPLE CORRELATION COEFFICIENTS (r's)														
CLASSIFICATION:															
GRADE ---------- INDEX	+.24	+.18	-.20	-.16	+.22	+.20	-.01	-.09	+.02	+.55	-.34	-.10	-.22	-.31	+.39
STAPLE -------- 32ND IN.	+.58	+.63	+.13	+.26	-.04	+.05	+.19	+.19	+.58	+.38	-.42	+.04	-.11	-.02	+.07
FIBER LENGTH:															
2.5% SPAN ---------- IN.	+.67	+.72	+.19	+.34	-.06	+.11	+.17	+.20	+.69	+.25	-.35	+.15	-.03	+.04	-.01
50/2.5 UNIF. ------ PCT.	+.51	+.49	+.03	+.15	+.19	+.15	+.14	+.03	+.39	+.13	+.12	-.08	+.17	-.19	+.17
MICRONAIRE ---------- RDG.	-.04	-.09	-.55	-.44	+.29	+.29	+.09	+.12	-.25	-.00	-.28	-.14	-.02	-.59	+.63
FIBER STRENGTH:															
ZERO GAGE --------- MPSI	+.42	+.39	-.49	-.35	+.17	+.32	+.12	+.09	+.18	+.29	-.14	-.30	+.04	-.24	+.24
1/8" GAGE -------- G/TEX	+.72	+.72	-.10	+.06	+.12	+.31	+.12	+.08	+.56	+.26	-.10	-.12	+.08	-.13	+.14
ELONGATION (1/8") - PCT.	-.09	-.06	+.62	+.52	+.04	-.09	-.23	-.24	+.01	+.16	+.18	+.04	-.17	+.17	-.13
SHIRLEY ANALYZER:															
VISIBLE WASTE ----- PCT.	-.13	-.07	+.22	+.22	-.24	-.17	+.07	+.16	+.07	-.50	+.29	+.18	+.20	+.22	-.29
TOTAL WASTE ------- PCT.	-.19	-.12	+.23	+.20	-.23	-.21	+.02	+.09	+.00	-.39	+.33	+.12	+.12	+.26	-.33
COLOR OF RAW STOCK:															
GRAYNESS (Rd) ----- PCT.	+.27	+.25	+.02	+.06	+.07	+.00	-.04	-.10	+.12	+.76	-.24	-.01	-.30	-.14	+.22
YELLOWNESS (+b) -- UNITS	-.16	-.14	+.01	-.01	-.03	-.03	-.06	+.00	-.06	-.28	+.48	-.06	+.30	+.01	-.08
PICKER AND CARD WASTE ---------- PCT.	-.32	-.28	+.06	+.04	-.34	-.28	+.11	+.20	-.17	-.46	+.29	+.14	+.18	+.20	-.25
YARN STRENGTH:															
22s (27 TEX) ------ LBS.	+1.00	+.94	+.28	+.44	-.08	+.10	+.26	+.20	+.85	+.17	-.02	+.16	+.10	+.03	-.03
50s (12 TEX) ------ LBS.	+.94	+1.00	+.35	+.53	-.17	+.04	+.28	+.28	+.90	+.18	-.03	+.16	+.10	+.04	-.05
YARN ELONGATION:															
22s (27 TEX) ------ PCT.	+.28	+.35	+1.00	+.81	-.25	-.30	+.04	+.07	+.46	+.05	+.22	+.24	-.00	+.34	-.33
50s (12 TEX) ------ PCT.	+.44	+.53	+.81	+1.00	-.28	-.25	+.07	+.15	+.60	+.05	+.14	+.27	-.03	+.19	-.18
YARN APPEARANCE:															
22s (27 TEX) ----- INDEX	-.08	-.17	-.25	-.28	+1.00	+.64	-.40	-.54	-.22	+.22	-.11	-.23	-.03	-.24	+.24
50s (12 TEX) ----- INDEX	+.10	+.04	-.30	-.25	+.64	+1.00	-.30	-.43	-.02	+.08	-.14	-.18	+.02	-.20	+.20
YARN NEPS:															
22s (27 TEX) ------- NO.	+.26	+.28	+.04	+.07	-.40	-.30	+1.00	+.64	+.24	-.10	+.06	+.03	+.11	-.06	+.03
50s (12 TEX) ------- NO.	+.20	+.28	+.07	+.15	-.54	-.43	+.64	+1.00	+.27	-.18	+.06	+.09	+.13	-.15	+.12
SPINNING POTENTIAL --- NO.	+.85	+.90	+.46	+.60	-.22	-.02	+.24	+.27	+1.00	+.04	+.03	+.23	+.14	+.16	-.16
COLOR OF FINISHER DRAWING SLIVER:															
GRAY:															
REFLECTANCE (Rd) - PCT.	+.17	+.18	+.05	+.05	+.22	+.08	-.10	-.18	+.04	+1.00	-.24	-.15	-.36	-.11	+.16
YELLOWNESS (+b) - UNITS	-.02	-.03	+.22	+.14	-.11	-.14	+.06	+.06	+.03	-.24	+1.00	+.06	+.35	+.04	-.13
BLEACHED:															
REFLECTANCE (Rd) - PCT.	+.16	+.16	+.24	+.27	-.23	-.18	+.03	+.09	+.23	-.15	+.06	+1.00	+.07	+.09	-.08
YELLOWNESS (+b) - UNITS	+.10	+.10	-.00	-.03	-.03	+.02	+.11	+.13	+.14	-.36	+.35	+.07	+1.00	+.14	-.27
DYED:															
REFLECTANCE (Rd) - PCT.	+.03	+.04	+.34	+.19	-.24	-.20	-.06	-.15	+.16	-.11	+.04	+.09	+.14	+1.00	-.97
BLUENESS (-b) --- UNITS	-.03	-.05	-.33	-.18	+.24	+.20	+.03	+.12	-.16	+.16	-.13	-.08	-.27	-.97	+1.00

TABLE 12.--COTTON: SIMPLE CORRELATION ANALYSIS FOR FIBER AND PROCESSING TEST RESULTS ON CARDED YARN FROM 8 LONG STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1981.

TEST ITEM	CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT		COLOR OF RAW STOCK		PICKER & CARD WASTE
	GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE		VISIBLE WASTE	TOTAL WASTE	Rd	+b	
	SIMPLE CORRELATION COEFFICIENTS (r's)												
CLASSIFICATION:													
GRADE ---------- INDEX	+1.00	+.62	+.52	+.23	-.78	+.27	+.14	+.43	-.76	-.61	+.20	-.44	-.49
STAPLE -------- 32ND IN.	+.62	+1.00	+.87	+.67	-.79	+.77	+.70	+.41	-.81	-.82	+.61	-.06	-.17
FIBER LENGTH:													
2.5% SPAN ---------- IN.	+.52	+.87	+1.00	+.67	-.86	+.87	+.72	+.01	-.63	-.57	+.70	-.25	-.28
50/2.5 UNIF. ------ PCT.	+.23	+.67	+.67	+1.00	-.43	+.66	+.45	-.07	-.62	-.57	+.25	+.33	-.45
MICRONAIRE ---------- RDG.	-.78	-.79	-.86	-.43	+1.00	-.55	-.55	-.28	+.72	+.56	-.65	+.48	+.47
FIBER STRENGTH:													
ZERO GAGE --------- MPSI	+.27	+.77	+.87	+.66	-.55	+1.00	+.70	-.23	-.38	-.44	+.45	+.07	+.05
1/8" GAGE -------- G/TEX	+.14	+.70	+.72	+.45	-.55	+.70	+1.00	+.09	-.39	-.55	+.61	+.09	+.26
ELONGATION (1/8") - PCT.	+.43	+.41	+.01	-.07	-.28	-.23	+.09	+1.00	-.56	-.58	+.32	-.15	-.04
SHIRLEY ANALYZER:													
VISIBLE WASTE ----- PCT.	-.76	-.81	-.63	-.62	+.72	-.38	-.39	-.56	+1.00	+.93	-.47	+.22	+.53
TOTAL WASTE ------- PCT.	-.61	-.82	-.57	-.57	+.56	-.44	-.55	-.58	+.93	+1.00	-.44	+.05	+.20
COLOR OF RAW STOCK:													
GRAYNESS (Rd) ----- PCT.	+.20	+.61	+.70	+.25	-.65	+.45	+.61	+.32	-.47	-.44	+1.00	-.52	-.12
YELLOWNESS (+b) -- UNITS	-.44	-.06	-.25	+.33	+.48	+.07	+.09	-.15	+.22	+.05	-.52	+1.00	+.37
PICKER AND CARD WASTE ---------- PCT.	-.49	-.17	-.28	-.45	+.47	+.05	+.26	-.04	+.53	+.20	-.12	+.37	+1.00
YARN STRENGTH:													
22s (27 TEX) ------ LBS.	+.53	+.88	+.93	+.84	-.76	+.87	+.70	-.02	-.72	-.70	+.48	-.00	-.32
50s (12 TEX) ------ LBS.	+.52	+.90	+.92	+.85	-.74	+.83	+.67	+.08	-.79	-.77	+.56	-.07	-.36
YARN ELONGATION:													
22s (27 TEX) ------ PCT.	+.30	+.42	+.03	+.05	-.21	-.18	+.17	+.96	-.61	-.67	+.40	-.10	-.04
50s (12 TEX) ------ PCT.	+.34	+.39	+.07	+.02	-.31	-.21	+.29	+.91	-.63	-.68	+.44	-.19	-.09
YARN APPEARANCE:													
22s (27 TEX) ----- INDEX	-.43	-.62	-.56	-.24	+.58	-.42	-.83	-.33	+.60	+.74	-.53	+.20	-.09
50s (12 TEX) ----- INDEX	-.54	-.64	-.39	-.10	+.59	-.13	-.58	-.81	+.71	+.78	-.59	+.26	-.01
YARN NEPS:													
22s (27 TEX) ------- NO.	+.02	-.40	-.42	-.54	+.07	-.63	+.00	+.20	+.13	+.10	-.16	-.17	+.08
50s (12 TEX) ------- NO.	+.19	-.21	-.50	-.52	+.24	-.52	-.12	+.48	-.10	-.25	-.30	-.08	+.27
SPINNING POTENTIAL --- NO.	+.49	+.85	+.87	+.86	-.68	+.80	+.64	+.06	-.80	-.79	+.52	-.06	-.37
COLOR OF FINISHER DRAWING SLIVER:													
GRAY:													
REFLECTANCE (Rd) - PCT.	+.47	+.75	+.70	+.11	-.67	+.57	+.62	+.46	-.52	-.59	+.82	-.50	+.14
YELLOWNESS (+b) - UNITS	-.63	-.40	-.60	-.19	+.80	-.21	-.05	-.15	+.51	+.22	-.60	+.80	+.72
BLEACHED:													
REFLECTANCE (Rd) - PCT.	+.25	+.16	-.25	-.30	+.08	-.28	+.09	+.80	-.35	-.54	+.03	-.02	+.33
YELLOWNESS (+b) - UNITS	-.01	+.05	+.16	+.63	-.11	+.12	-.14	-.34	-.07	+.14	-.25	+.41	-.59
DYED:													
REFLECTANCE (Rd) - PCT.	+.66	+.59	+.61	+.04	-.72	+.41	+.13	+.35	-.42	-.27	+.58	-.65	-.23
BLUENESS (-b) --- UNITS	-.61	-.59	-.65	-.17	+.69	-.52	-.11	-.18	+.36	+.20	-.49	+.52	+.26

TABLE 12.--CONTINUED

TEST ITEM	YARN PROPERTIES									COLOR FINISHER DRAWING SLIVER					
	STRENGTH		ELONGATION		APPEARANCE		NEPS		SPY NO.	GRAY		BLEACHED		DYED	
	22s	50s	22s	50s	22s	50s	22s	50s		Rd	+b	Rd	+b	Rd	-b
	SIMPLE CORRELATION COEFFICIENTS (r's)														
CLASSIFICATION:															
GRADE ---------- INDEX	+.53	+.52	+.30	+.34	-.43	-.54	+.02	+.19	+.49	+.47	-.63	+.25	-.01	+.66	-.61
STAPLE -------- 32ND IN.	+.88	+.90	+.42	+.39	-.62	-.64	-.40	-.21	+.85	+.75	-.40	+.16	+.05	+.59	-.59
FIBER LENGTH:															
2.5% SPAN ---------- IN.	+.93	+.92	+.03	+.07	-.56	-.39	-.42	-.50	+.87	+.70	-.60	-.25	+.16	+.61	-.65
50/2.5 UNIF. ------ PCT.	+.84	+.85	+.05	+.02	-.24	-.10	-.54	-.52	+.86	+.11	-.19	-.30	+.63	+.04	-.17
MICRONAIRE ---------- RDG.	-.76	-.74	-.21	-.31	+.58	+.59	+.07	+.24	-.68	-.67	+.80	+.08	-.11	-.72	+.69
FIBER STRENGTH:															
ZERO GAGE --------- MPSI	+.87	+.83	-.18	-.21	-.42	-.13	-.63	-.52	+.80	+.57	-.21	-.28	+.12	+.41	-.52
1/8" GAGE -------- G/TEX	+.70	+.67	+.17	+.29	-.83	-.58	+.00	-.12	+.64	+.62	-.05	+.09	-.14	+.13	-.11
ELONGATION (1/8") - PCT.	-.02	+.08	+.96	+.91	-.33	-.81	+.20	+.48	+.06	+.46	-.15	+.80	-.34	+.35	-.18
SHIRLEY ANALYZER:															
VISIBLE WASTE ----- PCT.	-.72	-.79	-.61	-.63	+.60	+.71	+.13	-.10	-.80	-.52	+.51	-.35	-.07	-.42	+.36
TOTAL WASTE ------- PCT.	-.70	-.77	-.67	-.68	+.74	+.78	+.10	-.25	-.79	-.59	+.22	-.54	+.14	-.27	+.20
COLOR OF RAW STOCK:															
GRAYNESS (Rd) ----- PCT.	+.48	+.56	+.40	+.44	-.53	-.59	-.16	-.30	+.52	+.82	-.60	+.03	-.25	+.58	-.49
YELLOWNESS (+b) -- UNITS	-.00	-.07	-.10	-.19	+.20	+.26	-.17	-.08	-.06	-.50	+.80	-.02	+.41	-.65	+.52
PICKER AND CARD WASTE ---------- PCT.	-.32	-.36	-.04	-.09	-.09	-.01	+.08	+.27	-.37	+.14	+.72	+.33	-.59	-.23	+.26
YARN STRENGTH:															
22s (27 TEX) ------ LBS.	+1.00	+.98	+.04	+.08	-.58	-.35	-.43	-.39	+.96	+.51	-.41	-.19	+.30	+.37	-.45
50s (12 TEX) ------ LBS.	+.98	+1.00	+.17	+.19	-.59	-.41	-.45	-.36	+.99	+.56	-.45	-.11	+.24	+.40	-.45
YARN ELONGATION:															
22s (27 TEX) ------ PCT.	+.04	+.17	+1.00	+.95	-.40	-.82	+.16	+.47	+.17	+.45	-.09	+.81	-.35	+.21	-.04
50s (12 TEX) ------ PCT.	+.08	+.19	+.95	+1.00	-.57	-.90	+.39	+.53	+.19	+.44	-.16	+.78	-.36	+.14	+.05
YARN APPEARANCE:															
22s (27 TEX) ----- INDEX	-.58	-.59	-.40	-.57	+1.00	+.81	-.33	-.35	-.59	-.64	+.17	-.44	+.40	-.15	+.02
50s (12 TEX) ----- INDEX	-.35	-.41	-.82	-.90	+.81	+1.00	-.33	-.44	-.39	-.70	+.27	-.70	+.43	-.36	+.18
YARN NEPS:															
22s (27 TEX) ------- NO.	-.43	-.45	+.16	+.39	-.33	-.33	+1.00	+.69	-.44	-.20	+.10	+.38	-.32	-.37	+.53
50s (12 TEX) ------- NO.	-.39	-.36	+.47	+.53	-.35	-.44	+.69	+1.00	-.31	-.01	+.32	+.85	-.64	-.25	+.43
SPINNING POTENTIAL --- NO.	+.96	+.99	+.17	+.19	-.59	-.39	-.44	-.31	+1.00	+.52	-.40	-.07	+.22	+.32	-.37
COLOR OF FINISHER DRAWING SLIVER:															
GRAY:															
REFLECTANCE (Rd) - PCT.	+.51	+.56	+.45	+.44	-.64	-.70	-.20	-.01	+.52	+1.00	-.47	+.33	-.53	+.76	-.66
YELLOWNESS (+b) - UNITS	-.41	-.45	-.09	-.16	+.17	+.27	+.10	+.32	-.40	-.47	+1.00	+.26	-.13	-.75	+.72
BLEACHED:															
REFLECTANCE (Rd) - PCT.	-.19	-.11	+.81	+.78	-.44	-.70	+.38	+.85	-.07	+.33	+.26	+1.00	-.68	+.01	+.18
YELLOWNESS (+b) - UNITS	+.30	+.24	-.35	-.36	+.40	+.43	-.32	-.64	+.22	-.53	-.13	-.68	+1.00	-.18	-.00
DYED:															
REFLECTANCE (Rd) - PCT.	+.37	+.40	+.21	+.14	-.15	-.36	-.37	-.25	+.32	+.76	-.75	+.01	-.18	+1.00	-.97
BLUENESS (-b) --- UNITS	-.45	-.45	-.04	+.05	+.02	+.18	+.53	+.43	-.37	-.66	+.72	+.18	-.00	-.97	+1.00

TABLE 12A.--COTTON: SIMPLE CORRELATION ANALYSIS FOR FIBER AND PROCESSING TEST RESULTS ON COMBED YARN FROM 8 LONG STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1981.

TEST ITEM	COMBER WASTE	YARN PROPERTIES							
		STRENGTH		ELONGATION		APPEARANCE		NEPS	
		22s	50s	22s	50s	22s	50s	22s	50s
		SIMPLE CORRELATION COEFFICIENTS (r's)							
CLASSIFICATION:									
GRADE ---------- INDEX	+.15	+.58	+.58	+.43	+.53	-.09	-.37	+.15	+.11
STAPLE -------- 32ND IN.	-.37	+.91	+.92	+.76	+.67	-.08	-.68	-.15	-.35
FIBER LENGTH:									
2.5% SPAN ---------- IN.	-.25	+.95	+.92	+.60	+.59	-.44	-.44	-.40	-.51
50/2.5 UNIF. ------ PCT.	-.82	+.80	+.84	+.47	+.48	+.00	-.30	-.01	-.71
MICRONAIRE ---------- RDG.	-.03	-.83	-.80	-.62	-.69	+.44	+.56	+.26	+.14
FIBER STRENGTH:									
ZERO GAGE --------- MPSI	-.31	+.85	+.81	+.34	+.24	-.27	-.25	-.34	-.65
1/8" GAGE -------- G/TEX	-.28	+.72	+.70	+.50	+.45	-.53	-.71	-.05	-.09
ELONGATION (1/8") - PCT.	-.06	+.06	+.13	+.67	+.57	+.36	-.66	+.17	+.40
SHIRLEY ANALYZER:									
VISIBLE WASTE ----- PCT.	+.46	-.74	-.79	-.84	-.89	+.06	+.56	-.18	+.14
TOTAL WASTE ------- PCT.	+.52	-.69	-.76	-.83	-.81	+.04	+.63	-.30	+.06
COLOR OF RAW STOCK:									
GRAYNESS (Rd) ----- PCT.	-.12	+.54	+.51	+.80	+.72	-.46	-.46	-.59	-.23
YELLOWNESS (+b) -- UNITS	-.51	-.05	-.01	-.32	-.41	+.48	-.15	+.42	-.17
PICKER AND CARD WASTE ---------- PCT.	+.24	-.32	-.36	-.30	-.52	+.09	-.09	+.04	+.28
COMBER WASTE -------- PCT.	+1.00	-.40	-.49	-.45	-.42	-.20	+.20	-.20	+.55
YARN STRENGTH:									
22s (27 TEX) ------ LBS.	-.40	+1.00	+.99	+.59	+.61	-.33	-.52	-.14	-.47
50s (12 TEX) ------ LBS.	-.49	+.99	+1.00	+.64	+.66	-.26	-.55	-.07	-.47
YARN ELONGATION:									
22s (27 TEX) ------ PCT.	-.45	+.59	+.64	+1.00	+.94	-.10	-.61	-.16	-.17
50s (12 TEX) ------ PCT.	-.42	+.61	+.66	+.94	+1.00	-.28	-.55	-.01	-.07
YARN APPEARANCE:									
22s (27 TEX) ----- INDEX	-.20	-.33	-.26	-.10	-.28	+1.00	+.08	+.13	-.13
50s (12 TEX) ----- INDEX	+.20	-.52	-.55	-.61	-.55	+.08	+1.00	-.18	-.25
YARN NEPS:									
22s (27 TEX) ------- NO.	-.20	-.14	-.07	-.16	-.01	+.13	-.18	+1.00	+.54
50s (12 TEX) ------- NO.	+.55	-.47	-.47	-.17	-.07	-.13	-.25	+.54	+1.00
COLOR OF FINISHER DRAWING SLIVER:									
GRAY:									
REFLECTANCE (Rd) - PCT.	+.10	+.57	+.53	+.72	+.58	-.29	-.50	-.42	-.07
YELLOWNESS (+b) - UNITS	-.19	-.47	-.44	-.49	-.60	+.39	+.08	+.49	+.19
BLEACHED:									
REFLECTANCE (Rd) - PCT.	+.01	-.16	-.10	+.39	+.31	+.27	-.45	+.52	+.62
YELLOWNESS (+b) - UNITS	-.44	+.28	+.30	-.16	-.05	+.18	+.06	-.03	-.54
DYED:									
REFLECTANCE (Rd) - PCT.	+.35	+.45	+.41	+.47	+.37	-.05	-.20	-.61	-.20
BLUENESS (-b) --- UNITS	-.28	-.51	-.46	-.36	-.26	-.01	+.12	+.66	+.38

TABLE 13.--COTTON: MULTIPLE REGRESSION ANALYSIS FOR SELECTED FIBER TEST MEASUREMENTS WITH PROCESSING TESTS, 58 SHORT STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1981.

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION: GRADE	CLASSIFICATION: STAPLE	FIBER LENGTH: 2.5% SPAN	FIBER LENGTH: 50/2.5 UNIF.	MICRONAIRE	FIBER STRENGTH: ZERO GAGE	FIBER STRENGTH: 1/8" GAGE	1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK: Rd	COLOR OF RAW STOCK: +b	STANDARD ERROR OF ESTIMATE	R^2
			REGRESSION COEFFICIENTS (b's)												
TOTAL PICKER & CARD WASTE --	1	+22.20	-.17											.88	.69
	2	+17.34	-.17										+.50	.84	.72
	3	+31.81	-.12				-.49					-.16		.82	.74
	4	+26.64	-.13				-.43					-.13	+.32	.81	.75
	5	+25.03	-.10			-.14					+.29	-.09	+.32	.80	.76
YARN STRENGTH:															
8s (74 TEX) -	1	+118.32							+8.11					14.87	.30
	2	+95.87							+8.00	+3.63				14.64	.34
	3	-2.20						+1.22	+6.51	+7.80				14.40	.37
	4	+29.87	-.43					+1.63	+5.02	+8.11				14.25	.40
	5	-26.48	-.43	+2.25				+1.60	+4.62	+7.59				14.31	.40
22s (27 TEX) -	1	+33.83							+2.82					3.77	.45
	2	+19.81						+.24	+2.55					3.67	.49
	3	-25.39		+1.58				+.28	+2.17					3.54	.53
	4	-58.57		+1.64		+.66		+.28	+2.29					3.47	.56
	5	+11.96		+2.57	-52.04			+.18	+2.48				-1.69	3.40	.59
ELONGATION:															
8s (74 TEX) -	1	+4.81								+.42				.45	.42
	2	+7.53					-.51			+.30				.38	.60
	3	+6.97					-.42			+.29	+.07			.38	.61
	4	+8.26					-.44			+.28	+.07		-.12	.37	.63
	5	+10.68					-.41	-.02		+.21	+.07		-.15	.37	.64
22s (27 TEX) -	1	+3.72								+.46				.44	.48
	2	+6.08					-.44			+.36				.38	.60
	3	+9.70		+.12			-.46			+.37				.38	.62
	4	+7.95					-.28	-.05	+.11	+.22				.38	.65
	5	+11.48		+.14			-.30	-.05	+.14	+.26				.36	.67

TABLE 13.--CONTINUED

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION: GRADE	CLASSIFICATION: STAPLE	FIBER LENGTH: 2.5% SPAN	FIBER LENGTH: 50/2.5 UNIF.	MICRONAIRE	FIBER STRENGTH: ZERO GAGE	FIBER STRENGTH: 1/8" GAGE	1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK: Rd	COLOR OF RAW STOCK: +b	STANDARD ERROR OF ESTIMATE	R^2
			REGRESSION COEFFICIENTS (b's)												
YARN APPEARANCE:															
8s (74 TEX) -	1	+27.81	+.95											11.58	.29
	2	+73.11					+11.76					+1.88		10.94	.38
	3	+34.77					+9.76			-3.13		+1.75		10.73	.41
	4	-150.21	+.79		+82.95	+3.34				-5.42				10.41	.46
	5	-167.82	+.66		+114.06	+2.65	+5.95			-4.49				10.24	.48
22s (27 TEX) -	1	+6.67	+1.15											13.94	.29
	2	-.23	+.79				+10.01							13.28	.37
	3	-141.69	+.84		+129.19		+12.79							13.07	.40
	4	-237.16	+.88		+135.59	+2.11	+10.93							12.92	.42
	5	-243.36	+.83		+147.90	+2.83	+8.50			-3.63				12.71	.45
YARN NEPS:															
8s (74 TEX) -	1	+74.48	-.76											10.78	.23
	2	+121.87	-.65					-.68						10.51	.28
	3	+147.61	-.69	-3.33						+3.72				10.35	.32
	4	+201.23	-.50	-3.06						+3.65		-1.06		10.23	.34
	5	+242.26	-.40		-113.85		-4.80			+2.99		-1.22		10.16	.37
22s (27 TEX) -	1	+188.59	-1.81											21.71	.30
	2	+118.98	-1.56							+7.05				21.03	.35
	3	+17.52	-1.33						+3.69	+7.46				20.80	.38
	4	+140.88	-1.29			-2.77			+3.24	+8.08				20.68	.40
	5	+308.79	-1.34		-191.54	-3.33			+5.11	+9.44				20.45	.42
SPINNING POTENTIAL -----	1	+42.25									+1.70			4.28	.22
	2	-2.97							+1.82	+2.03				3.91	.36
	3	+3.13							+1.47	+1.65	+.87			3.80	.41
	4	-24.68	+.24						+1.54	+1.74	+2.04			3.73	.44
	5	-16.00	+.26						+1.59	+1.75	+1.98	-.16		3.76	.44

TABLE 13.--CONTINUED

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION: GRADE	CLASSIFICATION: STAPLE	FIBER LENGTH: 2.5% SPAN	FIBER LENGTH: 50/2.5 UNIF.	MICRONAIRE	FIBER STRENGTH: ZERO GAGE	FIBER STRENGTH: 1/8" GAGE	1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK: Rd	COLOR OF RAW STOCK: +b	STANDARD ERROR OF ESTIMATE	R^2
			- - - - - - - - - REGRESSION COEFFICIENTS (b's) - - - - - - - - - -												
COLOR OF FINISHER DRAWING SLIVER:															
GRAY (Rd) -----	1	+26.47										+.71		1.75	.49
	2	+14.90								+.98		+.78		1.54	.61
	3	+33.89								+.88		+.68	-1.18	1.41	.68
	4	+20.06				+.35				+.81		+.65	-1.10	1.34	.72
	5	+19.11				+.48	-.83			+.59		+.66	-1.14	1.30	.74
GRAY (+b) -----	1	+4.44											+.64	.37	.50
	2	+6.30	-.02										+.62	.34	.59
	3	+9.41	-.02	-.09									+.62	.34	.61
	4	+9.26	-.02	-.10						+.05			+.62	.34	.61
	5	+7.49	-.02	-.12				+.02		+.12			+.65	.33	.62
BLEACHED (Rd) -	1	+84.89										+.09		.82	.06
	2	+75.26			+8.81							+.10		.79	.14
	3	+77.80			+6.61		-.23					+.11		.79	.15
	4	+78.39			+6.22	-.08					+.10	+.14		.80	.16
	5	+77.35	+.02		+6.06	-.08					+.18	+.13		.80	.17
BLEACHED (+b) -	1	+9.47										-.06		.50	.08
	2	+5.70	-.03				+.38							.49	.15
	3	+3.56	-.03				+.41						+.22	.48	.20
	4	+9.35		+.26	-8.76			+.02				-.08		.47	.25
	5	+9.63	-.01	+.26	-9.60			+.03				-.07		.47	.26
DYED (Rd) -----	1	+26.11									+.47			1.30	.19
	2	+40.49				-.33					+.45			1.24	.28
	3	+39.93				-.37				+.40	+.36			1.21	.33
	4	+43.30				-.38				+.39	+.37		-.27	1.21	.34
	5	+36.43		+.21		-.37				+.35	+.35		-.26	1.21	.35
DYED (-b) -----	1	+33.37									-.32			.87	.20
	2	+26.49				+.16					-.31			.85	.24
	3	+26.87				+.18				-.27	-.25			.83	.30
	4	+30.99				+.19		-.04		-.40	-.26			.83	.31
	5	+27.77				+.17		-.05		-.41	-.21	+.06		.83	.32

TABLE 14.--COTTON: MULTIPLE REGRESSION ANALYSIS FOR SELECTED FIBER TEST MEASUREMENTS WITH PROCESSING TESTS, 169 MEDIUM STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1981.

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION: GRADE	CLASSIFICATION: STAPLE	FIBER LENGTH: 2.5% SPAN	FIBER LENGTH: 50/2.5 UNIF.	MICRONAIRE	FIBER STRENGTH: ZERO GAGE	FIBER STRENGTH: 1/8" GAGE	1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK: Rd	COLOR OF RAW STOCK: +b	STANDARD ERROR OF ESTIMATE	R^2
			- - - - - - - - - - REGRESSION COEFFICIENTS (b's) - - - - - - - - - -												
TOTAL PICKER & CARD WASTE --	1	+4.74									+.81			.72	.61
	2	+10.41	-.05								+.55			.70	.64
	3	+8.75	-.05				+.36				+.61			.67	.66
	4	+14.24	-.05						-.12	-.25	+.54			.66	.68
	5	+12.55	-.05				+.24		-.11	-.18	+.58			.65	.69
YARN STRENGTH:															
22s (27 TEX) -	1	-8.24							+4.92					7.79	.53
	2	-103.44			+117.44				+3.55					6.72	.65
	3	-171.71			+112.26	+1.98			+2.96					6.21	.70
	4	-171.82			+112.24	+2.37	-4.08		+3.01					5.83	.74
	5	-164.43		-.95	+133.44	+2.39	-4.03		+3.08					5.82	.74
50s (12 TEX) -	1	-18.10							+2.33					3.69	.52
	2	-70.63			+64.80				+1.57					2.98	.69
	3	-99.75			+62.59	+.85			+1.32					2.77	.73
	4	-99.82			+62.58	+1.08	-2.46		+1.35					2.44	.80
	5	-97.84	-.06		+63.53	+1.07	-2.23		+1.41					2.42	.80
YARN ELONGATION:															
22s (27 TEX) -	1	+3.61								+.41				.41	.38
	2	+5.67					-.33			+.31				.38	.48
	3	+1.06			+4.09		-.33			+.35				.35	.57
	4	+2.65			+4.84		-.29	-.02		+.27				.33	.62
	5	+1.10			+4.46	+.06	-.33	-.03		+.25				.32	.64
50s (12 TEX) -	1	+2.97								+.30				.39	.27
	2	-2.69			+5.00				+.34					.33	.45
	3	-1.33			+5.02		-.22		+.27					.32	.51
	4	-3.11			+4.53	+.06	-.26			+.26				.31	.54
	5	-2.33			+4.99	+.07	-.24	-.02		+.20				.30	.58

TABLE 14.--CONTINUED

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION: GRADE	CLASSIFICATION: STAPLE	FIBER LENGTH: 2.5% SPAN	FIBER LENGTH: 50/2.5 UNIF.	MICRONAIRE	FIBER STRENGTH: ZERO GAGE	FIBER STRENGTH: 1/8" GAGE	1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK: Rd	COLOR OF RAW STOCK: +b	STANDARD ERROR OF ESTIMATE	R^2
			- - - - - - - - - - REGRESSION COEFFICIENTS (b's) - - - - - - - - - -												
YARN APPEARANCE:															
22s (27 TEX) -	1	+59.91					+7.85							14.36	.08
	2	+27.06					+10.09			+3.79				14.14	.12
	3	-26.41					+9.24	+.52		+5.68				13.95	.15
	4	+24.24		-1.95			+9.18	+.70		+6.01				13.85	.16
	5	+26.19	+.27	-2.34			+8.17	+.62		+5.69				13.80	.17
50s (12 TEX) -	1	+28.07						+.47						8.17	.10
	2	+18.02					+3.94		+1.42					7.95	.16
	3	+49.85		-1.20			+4.03		+1.82					7.89	.17
	4	+46.92		-2.23	+37.11		+4.08		+1.74					7.87	.18
	5	+4.95		-3.31	+81.19		+4.03	+.63		+2.85				7.76	.21
YARN NEPS:															
22s (27 TEX) -	1	+177.53								-16.61				55.85	.05
	2	-114.40		+8.17						-15.07				55.28	.08
	3	-19.40		+10.28						-15.10		-2.21		55.09	.09
	4	-220.78	-1.09	+9.09		+4.04				-15.80				54.99	.10
	5	-202.66	-.94	+10.08		+4.52		-.80		-18.63				55.04	.10
50s (12 TEX) -	1	+513.89								-41.37				129.54	.06
	2	-123.48			+562.69					-36.78				128.10	.09
	3	-70.80	-4.20	+28.08						-41.96				125.81	.12
	4	-171.28	-4.79	+28.75			+21.64			-36.25				125.76	.13
	5	-214.70	-3.51	+35.11				-2.46		-51.69			+12.83	125.70	.14
SPINNING POTENTIAL -----	1	-150.78			+194.45									7.94	.48
	2	-130.87			+201.07		-6.09							7.21	.57
	3	-213.50			+180.15	+2.54	-7.63							6.38	.67
	4	-195.79			+150.58	+2.01	-7.75		+1.62					6.00	.71
	5	-182.44			+145.90	+1.93	-6.63	-.37	+2.61					5.83	.72

TABLE 14.--CONTINUED

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION: GRADE	CLASSIFICATION: STAPLE	FIBER LENGTH: 2.5% SPAN	FIBER LENGTH: 50/2.5 UNIF.	MICRONAIRE	FIBER STRENGTH: ZERO GAGE	FIBER STRENGTH: 1/8" GAGE	1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK: Rd	COLOR OF RAW STOCK: +b	STANDARD ERROR OF ESTIMATE	R^2
			REGRESSION COEFFICIENTS (b's)												
COLOR OF FINISHER DRAWING SLIVER:															
GRAY (Rd) -----	1	+9.68										+.92		2.39	.58
	2	+3.07								+.94		+.94		2.28	.62
	3	-9.67						+.17		+1.63		+.85		2.13	.67
	4	-11.19						+.27	-.43	+1.87		+.87		2.08	.69
	5	-21.52		+.48				+.27	-.56	+1.88		+.83		2.04	.70
GRAY (+b) -----	1	+6.99											+.30	.52	.23
	2	+6.74									+.14		+.27	.50	.30
	3	+13.43		-.14			-.25						+.23	.48	.34
	4	+10.12		-.18		+.12	-.32						+.21	.46	.41
	5	+9.00		-.16		+.12	-.26				+.08		+.20	.46	.43
BLEACHED (Rd) -	1	+99.93						-.09						1.73	.09
	2	+88.82			+12.12			-.11						1.68	.15
	3	+93.68			+12.06			-.14		-.39				1.66	.17
	4	+95.05			+11.93		-.29	-.14		-.46				1.66	.18
	5	+96.55			+10.30		-.26	-.16	+.12	-.52				1.66	.18
BLEACHED (+b) -	1	+2.88											+.17	.50	.09
	2	+6.18										-.04	+.13	.49	.14
	3	+6.96								-.14		-.04	+.15	.48	.18
	4	+4.24				+.06				-.13		-.04	+.14	.47	.21
	5	+4.49				+.08	-.14			-.17		-.04	+.14	.47	.23
DYED (Rd) -----	1	+35.44					-1.78							1.35	.35
	2	+37.41	-.03				-1.66							1.34	.36
	3	+32.61	-.04		+5.06		-1.65							1.33	.37
	4	+37.62	-.08		+5.28		-1.74				-.32			1.32	.39
	5	+37.66	-.07		+7.40		-1.74		-.11		-.34			1.32	.40
DYED (-b) -----	1	+27.01					+1.26							.87	.39
	2	+24.73	+.03				+1.12							.85	.42
	3	+22.76	+.03				+1.25			+.22				.84	.44
	4	+19.00	+.06				+1.32			+.24	+.22			.83	.46
	5	+21.60	+.07		-2.65		+1.30			+.22	+.23			.82	.47

TABLE 15.--COTTON: MULTIPLE REGRESSION ANALYSIS FOR SELECTED FIBER TEST MEASUREMENTS WITH PROCESSING TESTS, 8 LONG STAPLE SAMPLES COLLECTED FROM SELECTED GIN POINTS, CROP OF 1981.

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION: GRADE	CLASSIFICATION: STAPLE	FIBER LENGTH: 2.5% SPAN	FIBER LENGTH: 50/2.5 UNIF.	MICRONAIRE	FIBER STRENGTH: ZERO GAGE	FIBER STRENGTH: 1/8" GAGE	1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK: Rd	COLOR OF RAW STOCK: +b	STANDARD ERROR OF ESTIMATE	R^2
						REGRESSION COEFFICIENTS (b's)									
TOTAL PICKER & CARD WASTE --	1	+18.34	-.12											.48	.24
	2	+24.44				-.46							+.42	.42	.50
	3	+34.10				-.88		+.10					+.52	.26	.85
	4	+28.24				-.95		+.08				+.12	+.71	.19	.94
	5	+27.54			-10.54	-.80		+.13				+.15	+.57	.17	.97
YARN STRENGTH:															
22s (27 TEX) -	1	-360.85			+416.07									5.83	.86
	2	-594.69			+295.63	+8.28								3.78	.95
	3	-176.13			+463.54						-7.90	-2.80		3.25	.97
	4	-360.79			+379.24	+4.74					-5.82	-2.00		1.95	.99
	5	-286.87			+342.45	+3.97				-3.34	-9.34	-1.56		1.24	1.00
50s (12 TEX) -	1	-175.32			+188.16									2.84	.84
	2	-288.77			+129.72	+4.02								1.86	.94
	3	-218.20			+111.27	+3.15					-3.60			.96	.99
	4	-161.54			+104.09	+2.45				-1.78	-5.63			.51	1.00
	5	-153.36			+112.77	+2.29			-.36	-1.94	-6.05			.31	1.00
YARN ELONGATION:															
22s (27 TEX) -	1	-1.36								+1.21				.22	.92
	2	+.19								+1.09	-.25			.21	.94
	3	+9.10	-.09							+1.12	-.47			.12	.99
	4	+12.21	-.11							+1.11	-.53		-.10	.10	.99
	5	+14.28	-.11					-.02		+1.01	-.65		-.10	.07	1.00
50s (12 TEX) -	1	-3.46								+1.35				.39	.82
	2	-6.71						+.14		+1.32				.37	.86
	3	-3.81						-.07	+.33	+1.16				.32	.92
	4	+5.65						-.12	+.28	+.73	-.73			.20	.98
	5	+2.79						-.13	+.21	+.56	-.85	+.10		.05	1.00

TABLE 15.--CONTINUED

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION: GRADE	CLASSIFICATION: STAPLE	FIBER LENGTH: 2.5% SPAN	FIBER LENGTH: 50/2.5 UNIF.	MICRONAIRE	FIBER STRENGTH: ZERO GAGE	FIBER STRENGTH: 1/8" GAGE	1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK: Rd	COLOR OF RAW STOCK: +b	STANDARD ERROR OF ESTIMATE	R^2
			- - - - - - - - - REGRESSION COEFFICIENTS (b's) - - - - - - - - -												
YARN APPEARANCE:															
22s (27 TEX) -	1	+310.57							-8.51					7.78	.68
	2	+223.14							-6.17		+10.57			6.78	.80
	3	-102.80				+7.37			-6.95		+15.48			5.16	.91
	4	-311.54				+10.26			-6.25	+6.39	+23.16			4.83	.94
	5	-309.41				+8.58		+1.00	-7.84	+9.37	+25.45			4.07	.97
50s (12 TEX) -	1	+168.31								-14.53				6.53	.66
	2	+264.90							-4.26	-13.71				3.47	.92
	3	+239.27							-4.44	-13.12			+2.96	2.78	.96
	4	+128.28							-6.20	-14.17		+1.77	+5.63	1.89	.99
	5	+128.22						+.24	-6.65	-13.54		+1.61	+5.46	1.96	.99
YARN NEPS:															
22s (27 TEX) -	1	+184.05						-1.86						10.63	.40
	2	+126.93						-3.61	+8.64					7.21	.77
	3	+5.13	+1.47					-3.87	+8.88					6.95	.83
	4	-30.48	+4.26	-11.71				-2.65	+12.67					.98	1.00
	5	-50.33	+4.48	-12.03				-2.65	+12.75				+.91	.64	1.00
50s (12 TEX) -	1	+1780.29				-36.29								45.60	.27
	2	+3481.11				-68.84					-81.38			30.97	.72
	3	+4553.67				-68.80					-103.61	-13.15		17.68	.93
	4	+4630.50		-21.64		-58.31					-128.59	-9.17		12.49	.97
	5	+4746.19		-26.02		-58.94			+8.18		-128.62	-10.81		8.28	.99
SPINNING POTENTIAL -----	1	-218.72			+252.45									5.05	.75
	2	-406.43			+155.77	+6.64								3.68	.89
	3	+10.44			+125.40					-6.51	-14.82			2.31	.97
	4	-135.98			+104.79	+3.31				-4.60	-11.59			1.47	.99
	5	-174.57				+6.21		+.50		-3.29	-10.12		-3.07	.54	1.00

TABLE 15.--CONTINUED

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION: GRADE	CLASSIFICATION: STAPLE	FIBER LENGTH: 2.5% SPAN	FIBER LENGTH: 50/2.5 UNIF.	MICRONAIRE	FIBER STRENGTH: ZERO GAGE	FIBER STRENGTH: 1/8" GAGE	1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK: Rd	COLOR OF RAW STOCK: +b	STANDARD ERROR OF ESTIMATE	R^2
			REGRESSION COEFFICIENTS (b's)												
COLOR OF FINISHER DRAWING SLIVER:															
GRAY (Rd) -----	1	-6.60										+1.14		1.61	.68
	2	-35.76	+.38									+1.05		1.47	.78
	3	-129.52	+.86				+3.80					+1.47		1.47	.82
	4	-54.01	+.97		-157.01			+.87				+1.93		.62	.98
	5	+94.32	+.62		-270.69		-6.70	+1.31				+2.00		.12	1.00
GRAY (+b) -----	1	+5.04											+.55	.31	.64
	2	+19.47				-.35							+.66	.20	.87
	3	+7.70					+1.05		+.28			-.12		.14	.95
	4	+7.42					+1.09		+.29	+.17		-.13		.09	.99
	5	+6.10					+1.15	+.02	+.26	+.22		-.14		.07	.99
BLEACHED (Rd) -	1	+85.23								+1.10				.52	.63
	2	+81.72					+.63			+1.22				.49	.73
	3	+149.86				-1.25					-1.92		+.46	.21	.96
	4	+136.86		+.46	-21.79	-.72					-1.41			.15	.99
	5	+143.65	-.06	+.49	-20.57	-.80					-1.52			.05	1.00
BLEACHED (+b) -	1	-12.79				+.39								.36	.40
	2	-26.30				+.64					+.65			.24	.78
	3	-29.67				+.81		-.04			+.61			.19	.88
	4	-39.66	+.08			+.87		-.05			+.84			.11	.97
	5	-40.08	+.09			+.81		-.05			+.85		+.10	.08	.99
DYED (Rd) -----	1	+39.05					-2.83							1.20	.52
	2	+11.02		+.78									-1.40	1.00	.72
	3	-21.67		+1.52							+2.05		-1.40	.82	.85
	4	-28.49		+3.18	-46.64						+3.43		-1.83	.44	.97
	5	-17.78		+4.55	-89.32					-1.21	+3.61		-2.36	.30	.99
DYED (-b) -----	1	+26.75					+1.50							.69	.48
	2	+57.26			-32.32				+.53					.57	.70
	3	+38.55			-42.82	+.67			+.56					.44	.86
	4	+36.16		-.47	-32.26	+.80			+.63					.35	.93
	5	+51.47		-1.00	-21.73	+.70			+.58		-.94			.11	1.00

TABLE 15A.--COTTON: MULTIPLE REGRESSION ANALYSIS FOR SELECTED FIBER TEST MEASUREMENTS WITH PROCESSING TESTS, ON COMBED YARN FROM 8 LONG STAPLE SAMPLES COLLCTED FROM SELECTED GIN POINTS, CROP OF 1981.

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION		FIBER LENGTH		MICRONAIRE	FIBER STRENGTH		1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK		STANDARD ERROR OF ESTIMATE	R^2
			GRADE	STAPLE	2.5% SPAN	50/2.5 UNIF.		ZERO GAGE	1/8" GAGE			Rd	+b		
			- - - - - - - - - - REGRESSION COEFFICIENTS (b's) - - - - - - - - - -												
COMBER WASTE --	1	+79.10				-1.40								.74	.67
	2	+100.94				-1.75	-1.40							.54	.86
	3	+111.52				-1.87	-1.74			-.62				.41	.93
	4	+104.90				-1.54	-2.26				+.79	-.16		.35	.96
	5	+112.16				-1.81	-2.08	+.08			+.73	-.19		.12	1.00
YARN STRENGTH:															
22s (27 TEX) -	1	-318.96			+396.11									4.39	.91
	2	-474.67			+315.91	+5.51								3.38	.96
	3	-478.53	+1.47		+373.84								+5.31	2.41	.98
	4	-573.74	+1.51		+180.25	+6.74			+2.36					1.40	1.00
	5	-510.45	+1.31		+233.22	+5.76			+2.43			-.81		.04	1.00
50s (12 TEX) -	1	-126.06		+4.82										2.44	.85
	2	-225.49		+3.40		+3.36								1.67	.94
	3	-174.63		+1.95		+3.81	-4.39							1.22	.98
	4	-126.81		+9.80				-1.29		-9.79	-2.34			.48	1.00
	5	-120.06	-.22	+10.74				-1.47		-10.48	-2.35			.03	1.00
YARN ELONGATION:															
22s (27 TEX) -	1	+8.94									-.81			.30	.68
	2	-2.30									-.58	+.14		.17	.92
	3	-1.87							-.12		-.68	+.17		.12	.96
	4	-5.98							-.18		-.68	+.23	+.16	.08	.99
	5	-5.61						-.02	-.14		-.69	+.23	+.16	.04	1.00
50s (12 TEX) -	1	+7.13									-.60			.23	.66
	2	+.03									-.45	+.09		.18	.82
	3	-.25			+12.78			-.09			-.46			.13	.93
	4	-17.17			+29.70		+.85	-.16			-.49			.04	1.00
	5	-16.31			+28.69		+.87	-.15			-.50		-.04	.00	1.00

TABLE 15A.--CONTINUED

DEPENDENT VARIABLE	NO. OF INDEP. VAR.	CONSTANT (a)	CLASSIFICATION: GRADE	CLASSIFICATION: STAPLE	FIBER LENGTH: 2.5% SPAN	FIBER LENGTH: 50/2.5 UNIF.	MICRONAIRE	FIBER STRENGTH: ZERO GAGE	FIBER STRENGTH: 1/8" GAGE	1/8" ELONGATION	SHIRLEY ANALYZER NONLINT	COLOR OF RAW STOCK: Rd	COLOR OF RAW STOCK: +b	STANDARD ERROR OF ESTIMATE	R^2
			- - - - - - - - - - REGRESSION COEFFICIENTS (b's) - - - - - - - - - -												
YARN APPEARANCE:															
22s (27 TEX) -	1	+201.84							-3.22					6.92	.28
	2	+157.97							-3.52				+5.76	5.88	.57
	3	-154.89		+9.29			+19.00		-5.71					4.07	.83
	4	+187.61		+7.53		-5.42			-7.08				+8.85	3.20	.92
	5	+90.12		+7.18		-6.24			-8.74			+2.04	+12.26	1.47	.99
50s (12 TEX) -	1	+268.16							-6.78					9.01	.51
	2	+332.65							-6.27	-12.25				5.27	.86
	3	+254.47							-7.70	-13.66		+1.58		5.09	.89
	4	+308.48							-8.93	-16.35	-5.59	+1.70		5.23	.92
	5	+593.23				-5.45			-9.18	-20.67	-13.01	+1.88		4.37	.96
YARN NEPS:															
22s (27 TEX) -	1	+345.81										-4.11		11.50	.35
	2	+562.87									-18.44	-6.23		8.02	.74
	3	+765.27		-7.66							-30.31	-4.81		6.91	.84
	4	+614.32						-1.95	+6.71		-17.62	-6.86		3.71	.97
	5	+682.33						-2.56	+6.44	-6.90	-23.89	-6.17		2.01	.99
50s (12 TEX) -	1	+5375.71				-117.71								88.50	.51
	2	+7883.71				-165.71					-120.00			77.83	.68
	3	+4055.84				-80.92		-21.65	+63.40					69.62	.80
	4	+10050.79			-6870.84	-50.12	-356.94		+68.98					38.13	.95
	5	+3644.49	+22.24			-90.30		-24.07	+85.08			-20.45		14.15	1.00

DESCRIPTION OF STATISTICS USED IN ANALYSIS

Some of the statistical concepts used in this study may be unfamiliar to many who will find the information in this report useful. Results reported in this study include the means, standard deviations, simple correlations, regression equations and coefficients of determination (R-squares). Formulas for each of these results may be found in any good textbook on statistical correlation. However, for those not familiar with these concepts, the following common language explanation is given for each item as it is used in this report:

A. MEAN VALUE is the simple arithmetical average of each measured property for the spinning lots included in the study.

B. STANDARD DEVIATION is a measure of dispersion around the mean value expressed in the same terms as the variable. For a normal distribution, approximately 68 percent of the values will be within plus or minus one standard deviation of the mean; 95 percent within plus or minus two standard deviations; and nearly all values will be within plus or minus three standard deviations.

> Example: (From Table 9, page 70) The mean or average Fibrograph 2.5% span length for the short staple cottons is 0.983 inches. The standard deviation is 0.026 inches. This indicates that 68 percent of the lots tested in the short staple group should have a fiber length between 0.957 and 1.009 inches. The fiber length of 95 percent of the lots tested fall between 0.931 and 1.035 inches and nearly all would be between 0.905 and 1.061 inches.

C. SIMPLE CORRELATION COEFFICIENT (r) is a measure of the linear relationship between two variables, i.e., how one variable is associated with the other. A correlation coefficient of 0 indicates no relationship, and 1.0 indicates a perfect relationship. A plus sign before the correlation coefficient indicates that the value of both variables change in the same direction, whereas a minus sign indicates that they change in opposite directions.

> Example: (From Table 11, page 75, line 1) The simple correlation coefficient of the grade index with picker and card waste is -.74. This indicates that grade and picker and card waste are inversely related, i.e., as one goes up or down, the other goes in the opposite direction.

D. REGRESSION EQUATION or prediction equation is used to estimate changes in the dependent variable which will result from changes in the independent variable or variables. It is written:

$$Y = a + b_1X_1 + b_2X_2 + \ldots + b_NX_N$$

where Y is the dependent variable and the X's are the independent variables.

The constant "a" indicates the starting point or height of the regression line when it is to be plotted on a graph or to be used in calculating changes in the dependent variable. The regression coefficient "b" indicates the directional change in the dependent variable that is associated with changes in the independent variable. The spread or scatter of the data around the regression line is measured by the standard error. The standard error has the same relationship to the regression line as the standard deviation has to the mean value (see paragraph B, above).

Example: (From Table 14, three-variable model, page 83) The constant, coefficients and standard error for the re-regression equation with 22s yarn strength as the dependent variable are:

Constant (a)	-171.71
Regression Coefficients (b):	
2.5% Span Length	+112.26
50/2.5% Uniformity	+1.98
1/8-Inch Gage Fiber Strength	+2.96
Standard Error	+/-6.21

With regression coefficients (b's) of +112.26 for 2.5% span length, +1.98 for 50/2.5 uniformity, and +2.96 for 1/8-inch gage fiber strength, the following average conditions should exist:

(1) With any unit changes (.01 inch) in 2.5% span length, yarn strength should change 1.12 pounds in the same direction.

(2) With any unit change (1.0) in fiber uniformity, yarn strength should change 1.98 pounds in the same direction.

D. REGRESSION EQUATION (continued)

(3) With any unit change (1.0 G/tex) in 1/8-inch gage fiber strength, yarn strength should change 2.96 pounds in the same direction.

Expressing the equation algebraically:

$$\text{Yarn strength 22s (lbs)} = -171.71 + 112.26\ (2.5\%\ \text{span length}) + 1.98\ (\text{uniformity}) + 2.96\ (1/8\text{-inch gage fiber strength})$$

To predict the yarn strength from a bale of cotton with a medium fiber length of 1.05, a fiber uniformity of 42 and a fiber strength of 22 grams per tex, the equation would be:

$$\text{Yarn strength (lbs)} = -171.71 + 112.26(1.05) + 1.98(42) + 2.96(22)$$

$$\text{Yarn strength (lbs)} = 94.44$$

The standard error can be used to establish a lower and upper limit about the predicted value. In this example, the standard error of 6.21 indicates that yarn strength from a bale of cotton with these fiber properties should be 94.44 +/- 6.21 pounds or between 88 and 101 pounds 68 percent of the time.

Regression equations are given in the tables for simple and multiple relationships. Equations for simple relationships may be calculated by using the formula:

$$Y = a + bX$$

$$\text{where } a = \text{Mean } Y - b\ (\text{Mean } X)$$

$$b = r\ \frac{\text{Std. Dev. } Y}{\text{Std. Dev. } X}$$

Estimating an equation with more than one independent variable is more complex. Most statistical textbooks describe the method for estimating multivariate equations.

E. R-SQUARE (R^2) when multiplied by 100 will give the coefficient of determination. The resulting percentage is the amount of the variation in the dependent variable explained by the independent variable(s). In the above example, $R^2 = .70$; therefore, 70% of the variation in yarn strength is explained by the 2.5% span length, fiber uniformity and 1/8-inch gage fiber strength. The remaining variation in yarn strength (30%) is unexplained by the three independent variables in this equation.

E. R-SQUARE (continued)

For simple regressions (equations containing one independent variable) the coefficient of determination can be obtained easily by squaring the simple correlation coefficient (r) and multiplying by 100.

The multiple correlation coefficient (R) can be obtained by taking the square root of R-square. This coefficient is a measure of the linear relationship between one dependent variable and two or more independent variables. It has no plus or minus sign because one independent variable may contribute positively, and another negatively, in explaining the variation in the dependent variable. The multiple R may fall between 0 and 1.0, with 0 indicating no relationship and 1.0 a perfect relationship.

INTERPRETING STATISTICAL DATA

In referring to the data presented in the tables of this report, it is well to keep in mind several factors which influence the results and could lead to erroneous conclusions.

Results obtained from regression analysis are significantly influenced by the specific variables included in an equation and by their number. This is mainly due to interrelationships of fiber properties. As interrelated properties (independent variables) are added to an equation, the specific contribution of a given property may decrease sharply while at the same time the overall correlation will increase. For example, a correlation of staple length with yarn strength usually shows a good relationship, with a large amount of the variation in yarn strength explainable by differences in staple length. But as other measures are taken into consideration, particularly fiber strength at 1/8-inch gage, the importance of staple length in explaining the total variation in yarn strength decreases rather sharply; even though the total variation explained is increased. This situation occurs because fiber strength is more closely related to yarn strength than is staple length. Yet when fiber strength is not included in the equation, some of the effects of strength are evidenced through the interrelation of strength and staple length. Perhaps the most important fact to be kept in mind is that interpretations are no better than the principles used in the analysis. To estimate the importance of a specific variable, all of the available data should be studied using the appropriate statistical techniques.

BASIS FOR INTERPRETATION OF TEST RESULTS

The following explanation of the data published in Tables 1 through 8 of this report may be helpful in the interpretation of test results.

Classification

Classification was made in accordance with the official Cotton Standards for grade and staple length. These results are presented under the usual terms for the individual lots, but the grade values were converted to an index for averaging in the summary tables.

Grade index, as reported in the summary tables, is designed to reflect differences in market value and provides a method for averaging the grade for a number of individual lots. Middling grade is used as the basis of 100, and higher or lower index numbers reflect higher or lower average market values, respectively. Index values for the various grades of upland cotton are shown below.

GRADE		GRADE INDEX						
Name	Code	Plus (0)	White (1)	Light Spotted (2)	Spotted (3)	Tinged (4)	Light Gray (6)	Gray (7)
Good Middling	(1)		105	103	101		99	93
Strict Middling	(2)		104	102	99	91	98	91
Middling	(3)	102	100	97	93	82	92	84
Strict Low Middling	(4)	97	94	89	83	75	85	75
Low Middling	(5)	90	85	80	75	68		
Strict Good Ordinary	(6)	81	76					
Good Ordinary	(7)	73	70					
Below Grade	(8)		60					

The GRADE of cotton is obtained by evaluating color, leaf and preparation in relation to the official standards. Grade provides an indication of fiber color and the waste content of a sample of cotton. Experience has shown the average relationship between picker and card waste and various grades of upland cotton to be approximately as given in the tabulation shown in the subsequent section on manufacturing waste.

In comparing these average grade figures with the picker and card waste data, it should be understood that variations from the averages for individual samples are attributable to the nature of the extraneous material present in the cotton, the characteristics of the fiber, and whether the grade designation was low because of poor color.

STAPLE LENGTH is the length of a typical portion of the fibers in the samples as determined by the classer in comparison with official standards. Uniformity of fiber length, as well as other fiber properties, influences to some extent the classer's selection of the typical portion of the fibers on which the staple length designation is based. In general, there is a fairly close relationship between the staple length as designated by the classer and the fineness and strength of the yarn that can be manufactured from the cotton. These relationships, however, are also influenced by other fiber properties, the measurement of which will be discussed in the paragraphs which follow.

Fiber Tests

FIBER LENGTH data was obtained by the Digital Fibrograph method for the short, medium and long staple American upland samples and by the array method for the extra long American Pima and upland samples. Briefly, the Digital Fibrograph method consists of placing representative specimens of cotton at random on a comb or combs, parallelizing the beards of cotton extending from one side of the combs, and scanning these beards photoelectrically on the instrument at three-length intervals beginning at 0.15 inch from the teeth of the combs and ending near the outer fringe. The 2.5% span length and the 50/2.5 uniformity ratio values reported for each lot are based on five specimens tested by each of two technicians.

The Digital Fibrograph 2.5% span length values reported indicate the length which will be spanned by 2.5% of the fibers when they are parallel and randomly distributed. It is also the length where the amount of fibers indicated by the instrument is 2.5% of the amount at the starting point of 0.15 inch. The Digital Fibrograph 2.5% span length values are closely related to staple length designations.

The Digital Fibrograph 50/2.5 uniformity ratio values reported indicate the relative uniformity of fiber length in the samples. They represent the ratios between the 50% span length and the 2.5% span length, expressed as percentages. Larger values indicate more uniform fiber length distribution. Unusually low fiber length uniformity tends to increase manufacturing waste, to make processing more difficult, and to lower the quality of the product.

The following adjective descriptions will serve to classify cottons from the standpoint of 2.5% span length and fiber length uniformity:

2.5 Percent Span Length		50/2.5 Uniformity Ratio	
Below 0.97	Short	Below 41	Very Low
0.97 - 1.09	Medium	41 - 43	Low
1.10 - 1.28	Long	44 - 46	Average
Above 1.28	Extra Long	47 - 48	High
		Above 48	Very High

Data Source: 1,956 American upland lots tested from the crops of 1974-78.

Array tests for the extra long staple American Pima and upland samples were performed on the Suter-Webb fiber sorter. Briefly, this method consists of parallelizing the fibers in a representative 75-milligram specimen of cotton through a series of combs, separating the fibers into length groups at 1/8-inch intervals, and weighing the fibers in each length group. The upper quartile length and coefficient of variation values reported are based on one specimen tested by each of two technicians.

The array upper quartile length values reported indicate the length which is exceeded by 25 percent of the weight of the fibers in the samples. They are closely related to and longer than both the Fibrograph and the classer's staple designations. This relationship may vary, however, because the methods measure different fiber length characteristics.

The array coefficient of length variation values reported indicate the relative variability of fiber length in the samples. They represent the standard deviation of the weight-length frequencies expressed as a percentage of the mean length. Smaller values indicate more uniform fiber length distributions. Excessive fiber length variation tends to increase manufacturing waste, to make processing more difficult, and to lower the quality of the product. It is considered, therefore, desirable for a cotton to have a low coefficient of variation.

The following adjective descriptions will serve to classify cottons from the standpoint of upper quartile length and fiber length variations:

Upper Quartile Length		Coefficient of Fiber Length Variation	
Below 1.07	Short	Below 26	Very Low Variation
1.07 - 1.21	Medium	26 - 29	Low Variation
1.22 - 1.42	Long	30 - 33	Average Variation
Above 1.42	Extra Long	34 - 37	High Variation
		Above 37	Very High Variation

Data Source: 830 American upland lots tested from the crops of 1958-60. (More recent data not available)

FIBER FINENESS AND MATURITY in combination were determined by the micronaire test. This is an instrument test which measures the resistance of a plug of cotton to air flow. A representative standard weight of cotton fibers is placed in the instrument specimen holder and compressed to a fixed volume. Air at a known pressure is forced through the specimen and the amount of flow is indicated by a direct reading scale. Readings obtained are relative measures of either the weight per unit length or the cross-sectional size of the fibers. Because the instrument measures may differ from the actual weight per inch, depending upon the fiber characteristics of the sample, the results are reported in terms of "micronaire reading" instead of micrograms per inch. These readings are taken from the curvilinear scale adopted in 1950, which are now in international use. Fiber fineness contributes to yarn strength, particularly when fine numbers are spun, but it also tends to increase neppiness and to require a reduced rate of processing.

Fiber maturity, also an important factor affecting the appearance of yarns and fabrics, is a desirable characteristic from the standpoint of low picker and card waste. Immature fibers are susceptible to the formation of neps, and contribute to lower yarn appearance grades. The desirability of micronaire reading, therefore, depends on the specific end product or use of the cotton.

Several instruments, including the Micronaire, Fibronaire, IIC-Shirley Fineness/Maturity Tester, and Port-Ar, may be used for these tests. All instruments now use the same scale and report results in the same terms, i.e., "micronaire reading." The micronaire reading is now a part of the official standards for upland cotton along with grade and staple length.

FIBER STRENGTH is an important factor in determining yarn strength. Cottons with good fiber strength usually give less trouble in the manufacturing processes than the weak fibered cottons. Tests for fiber strength are made without a space between the clamp jaws (zero gage) using the Pressley flat bundle tester, and with a 1/8-inch spacer between the clamp jaws (1/8-inch gage) using the Stelometer. Strength results from the Pressley and the Stelometer were controlled at the same level by use of standard calibration cottons. Use of the Stelometer also provides a measure of fiber elongation. Comparative tests have shown that the results of the 1/8-inch gage tests are more highly correlated with yarn strength than the results of the zero gage tests. Results for both methods are reported, however, because the zero gage tests are widely used by the cotton industry.

The results for the Pressley zero gage test are reported in terms of thousand pounds per square inch, as calculated by the use of Formula 1. These results may be converted to other methods of expressing fiber strength by use of Formulas 2, 3 and 4:

(1) Thousand pounds per square inch (Mpsi) =

$$\frac{\text{breaking load in lb X 10.81}}{\text{bundle weight in mg}}$$

(2) Grams per tex (G/tex) = Mpsi multiplied by 0.496

(3) Strength-weight ratio = Mpsi divided by 10.81

(4) Strength-weight ratio = G/tex divided by 5.36

The results of the 1/8-inch gage tests are reported in terms of grams per tex in accordance with the recommendations of the American Society for Testing and Materials (ASTM) and the International Standards Organization (ISO). A tex unit is equal to the weight in grams of 1000 meters of the material. There is a correlation between the 1/8-inch gage strength test results and fiber length. Cottons with short lengths tend to have lower average strength values than long staple cottons. Results for Stelometer 1/8-inch gage tests are calculated by use of Formula 5. Stelometer results are adjusted to Pressley level by use of calibration cottons.

(5) Grams per tex = $\frac{\text{breaking load (kg) X 15}}{\text{bundle weight in mg}}$

The following descriptive terms may be applied to the data shown in this report:

Staple Length Group and Descriptive Designation	Pressley Zero Gage Strength (Thousand PSI)	Pressley 1/8-Inch Gage Strength (Grams Per Tex)
Short Staple:		
Very Low	74 - 78	17 - 18
Low	79 - 83	19 - 20
Average	84 - 88	21 - 22
High	89 - 93	23 - 24
Very High	94 - 98	25 - 26
Medium Staple:		
Very Low	70 - 76	16 - 18
Low	77 - 83	19 - 21
Average	84 - 90	22 - 24
High	91 - 97	25 - 27
Very High	98 - 104	28 - 30
Long Staple:		
Very Low	71 - 77	18 - 20
Low	78 - 84	21 - 23
Average	85 - 91	24 - 26
High	92 - 98	27 - 29
Very High	99 - 105	30 - 32
Extra Long Staple:		
Very Low	93 - 96	27 - 29
Low	97 - 100	30 - 32
Average	101 - 104	33 - 35
High	105 - 108	36 - 38
Very High	109 - 112	39 - 41

Data Source: 365 short staple; 1,447 medium staple; 144 long staple; and 88 extra long staple lots of cotton tested from the crops of 1974-78.

FIBER ELONGATION results were obtained in connection with the 1/8-inch gage fiber strength tests by using the Stelometer instrument. The following adjective ratings will assist in the interpretation of the fiber elongation results reported:

Descriptive Designation	Fiber Elongation (Percent)
Very Low	4.9 and below
Low	5.0 - 5.8
Average	5.9 - 6.7
High	6.8 - 7.6
Very High	7.7 and above

Data Source: 1,956 American upland lots tested from the crops of 1974-78.

COLOR MEASUREMENTS were made on samples of raw cotton from each lot by using the Nickerson-Hunter Cotton Colorimeter. The basic color values reported are in terms of grayness (Rd) and yellowness (+b) scales designed especially for cotton. GRAYNESS indicates how light or dark the cotton sample is, and YELLOWNESS indicates how much yellow color is in the sample. A three-digit color code is used in place of the single codes for grayness and yellowness used in the past. The color code subdivides each grade into quadrants to denote relative color differences within a grade for a more precise color measurement.

The relationship of these new color codes to grayness (Rd) and yellowness (+b) values and to the color of the Univeral Grade Standards for upland cotton is shown in Figure 2, page 102.

A color diagram for American Pima cotton is shown in Figure 3, page 103.

Color Meter Block Diagram

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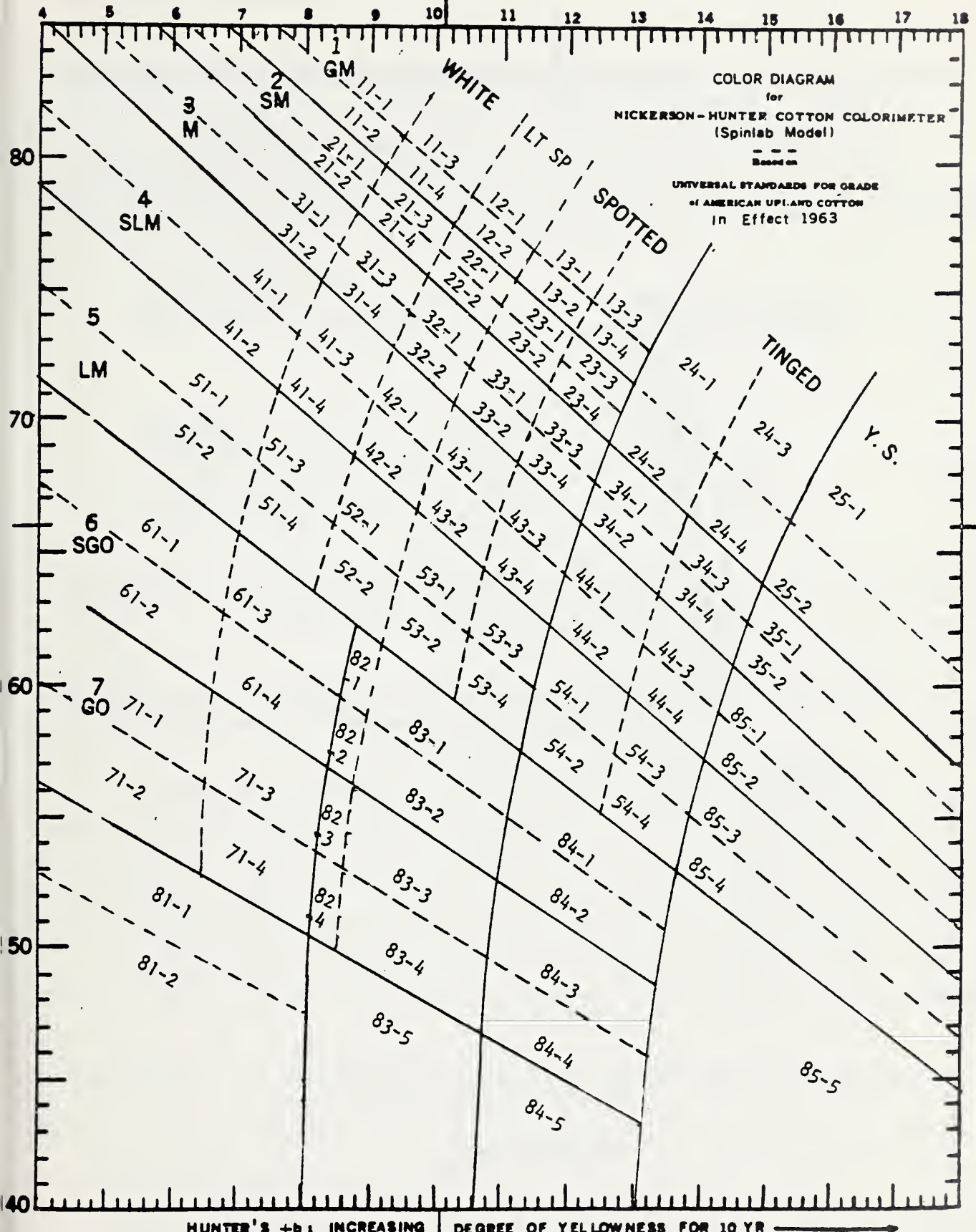

Figure 2

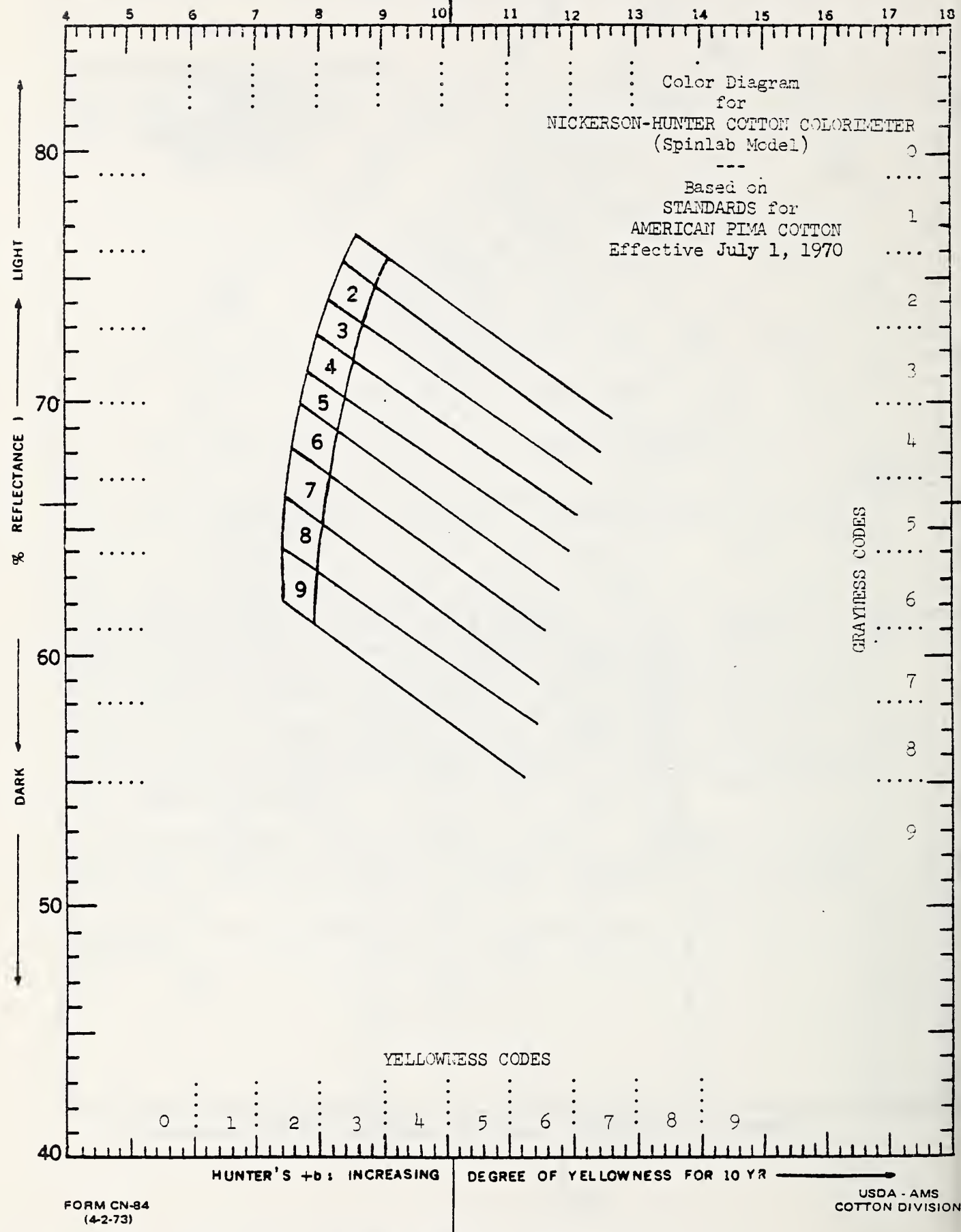

Figure 3. Colorimeter diagram for American Pima cotton.

NONLINT CONTENT for the various lots was determined by the use of the Shirley Analyzer which separates the lint from the foreign matter. The total nonlint values reported include both visible and invisible loss. These results are distinguished from total picker and card waste in that practically no fiber is included, whereas textile mill wastes include appreciable amounts of fiber. Tests performed in previous years show the following average relationship of Shirley Analyzer nonlint to grade:

American Upland Grade	Code	Average Nonlint Content (Percent)
Strict Middling	(21)	1.9
Middling	(31)	2.3
Strict Low Middling	(41)	3.1
Low Middling	(51)	4.4
Strict Good Ordinary	(61)	5.6
Good Ordinary	(71)	7.2

Data Source: 5,953 American Upland Color and Trash Survey samples tested from crops of 1974-78.

The following scale has been developed to represent the average nonlint content for grades of American Pima cotton:

American Pima Grade	Average Nonlint Content (Percent)
2	1.9
3	2.3
4	3.0
5	3.7
6	4.7
7	6.0
8	8.4
9	9.1

Data Source: 2,543 American Pima Color and Trash Survey samples tested from crops of 1974-78.

Differences between results obtained for individual lots and the average percentages shown for the grades may be due to one or more of the following reasons:

(1) Grade is a combination of color, leaf and preparation; any one of which may be the limiting factor.

(2) There is a combination of trash allowable within each specific grade.

(3) These data are based on weight and do not take into consideration the nature of the trash, which may be as important as weight in determining the final grade.

Yarn Processing Tests

Small-scale spinning tests were performed to provide indications of the processing behavior of the various cottons. The percentage of picker and card waste is related to mill turnout. Low percentages of waste indicate high mill turnout. Yarn strength, yarn appearance, yarn neps and chemical finishing test results as measured in these tests are related to similar quality measurements of the mill product. The spinning potential test provides a measure of spinning end breakage and is directly related to the spinning behavior in the mill. High spinning potential yarn (SPY) numbers indicate low end breakage or good spinning in the mill.

MANUFACTURING WASTE reported for a sample of cotton is important because excessive waste increases the cost of cotton products. The percentage of waste extracted by the picking and carding processes in performing a spinning test provides a measure of manufacturing waste. There is an average relationship between this waste and grade as discussed in the previous section on the grade of cotton. The rate at which the cotton is carded, however, affects the picker and card waste values because the more thorough carding action obtained when the carding rate is decreased extracts a larger quantity of waste. The longer staple cottons are generally carded at a lower rate than the shorter cottons in order to obtain acceptable yarn quality. Tests performed in recent years show the following average relationship of picker and card waste to grade:

American Upland Grade	Code	Average Picker and Card Waste (Percent)
Strict Middling	(21)	5.2
Middling	(31)	5.5
Strict Low Middling	(41)	6.0
Low Middling	(51)	6.9
Strict Good Ordinary	(61)	7.7
Good Ordinary	(71)	8.8

American Pima Grade	Average Picker and Card Waste (Percent)
2	6.4
3	6.7
4	7.4
5	8.0
6	8.9
7	10.1
8	12.3
9	12.9

Data Source: 5,953 samples of American upland cotton and 2,543 samples of American Pima cotton tested for Shirley Analyzer nonlint content from the crops of 1974-78. Picker and card waste was calculated from its relationship to Shirley Analyzer nonlint content.

The percentage of waste removed by the comber is reported in addition to the picker and card waste for cottons processed into combed yarn. The shorter staple cottons are processed through the comber with a closer setting than for the longer staple cottons because smaller comber waste percentages are usually extracted from this cotton in commercial practice.

YARN STRENGTH is perhaps the most important and reliable test of yarn quality. Yarn strength not only determines the range of the usefulness of a given cotton, but is also an indication of spinning and weaving performance. The yarn strength test is performed on 120 yard skeins (80 turns on a 1.5 yard reel). Results reported are based on the average of 25 skeins for each yarn number. Yarn strength is reported in terms of skein strength, since studies have shown that such strength values are more closely related to fabric strength as well as to fiber properties than single strand yarn strength. Skein strength data for the two numbers spun are reported for each lot. Length, strength and fineness influence yarn strength more than other fiber properties.

The following descriptive terms may be of help in determining the relative level of yarn strength in this report:

Kind of Yarn, Staple Length Group and Description	Yarn Skein Strength in Pounds for the Specified Yarn Numbers	
Carded Yarns:		
Short Staple Group:	8s	22s
Low	262 - 282	82 - 90
Average	283 - 303	91 - 99
High	304 - 324	100 - 108
Medium Staple Group:	22s	50s
Low	88 - 100	26 - 32
Average	101 - 113	33 - 39
High	114 - 120	40 - 46
Long Staple Group:	22s	50s
Low	89 - 105	26 - 34
Average	106 - 122	35 - 43
High	123 - 139	44 - 52
Combed Yarn:		
Long Staple Group:	22s	50s
Low	110 - 126	35 - 43
Average	127 - 143	44 - 52
High	144 - 160	53 - 61
Extra Long Staple Group:	50s	80s
Low	61 - 63	31 - 33
Average	64 - 66	34 - 36
High	67 - 69	37 - 39

Data Source: 365 short staple; 1,447 medium staple; 144 long staple; and 88 extra long staple lots of cotton tested from the crops of 1974-78.

YARN ELONGATION results were obtained in connection with yarn skein strength tests. Elongation in the yarn is highly correlated with fiber elongation. Yarns with high elongation give less end breakage in weaving than yarns with low elongation.

The following descriptive terms may be of some help in determining the relative levels of yarn elongation:

Kind of Yarn, Staple Length Group and Description	Yarn Elongation in Percent for the Specified Yarn Numbers	
Carded Yarns:		
Short Staple Group:	8s	22s
Low	6.3 - 6.9	5.2 - 5.8
Average	7.0 - 7.6	5.9 - 6.5
High	7.7 - 8.3	6.6 - 7.2
Medium Staple Group:	22s	50s
Low	5.0 - 5.6	3.4 - 4.0
Average	5.7 - 6.3	4.1 - 4.7
High	6.4 - 7.0	4.8 - 5.4
Long Staple Group:	22s	50s
Low	4.7 - 5.3	3.4 - 4.0
Average	5.4 - 6.0	4.1 - 4.7
High	6.1 - 6.7	4.8 - 5.4
Combed Yarn:		
Long Staple Group:	22s	50s
Low	5.6 - 6.0	4.2 - 4.6
Average	6.1 - 6.5	4.7 - 5.1
High	6.6 - 7.0	5.2 - 5.6
Extra Long Staple Group:	50s	80s
Low	5.2 - 5.4	4.3 - 4.5
Average	5.5 - 5.7	4.6 - 4.8
High	5.8 - 6.0	4.9 - 5.1

Data Source: 365 short staple; 1,447 medium staple; 144 long staple; and 88 extra long staple lots of cotton tested from the crops of 1974-78.

YARN APPEARANCE refers to the relative evenness, smoothness, and freedom from foreign material of the yarn as evaluated by visual comparison of the yarn with the latest standards adopted by the American Society for Testing and Materials (ASTM). Since appearance is very important in many types of cotton products, high yarn appearance grades are desirable. The following descriptive terms may be of help in determining the relative levels of yarn appearance in this report.

Kind of Yarn, Staple Length Group and Description	Yarn Appearance Index for the Specified Yarn Numbers	
Carded Yarns:		
Short Staple Group:	8s	22s
Low	109 - 117	91 - 101
Average	118 - 126	102 - 112
High	127 - 135	113 - 123
Medium Staple Group:	22s	50s
Low	76 - 88	58 - 68
Average	89 - 101	69 - 79
High	102 - 114	80 - 90
Long Staple Group:	22s	50s
Low	77 - 91	60 - 70
Average	92 - 106	71 - 81
High	107 - 121	82 - 92
Combed Yarn:		
Long Staple Group:	22s	50s
Low	93 - 105	77 - 87
Average	106 - 118	88 - 98
High	119 - 131	99 - 109
Extra Long Staple Group:	50s	80s
Low	100 - 106	97 - 105
Average	107 - 113	106 - 114
High	114 - 120	115 - 123

Data Source: 365 short staple; 1,447 medium staple; 144 long staple; and 88 extra long staple lots of cotton tested from the crops of 1974-78.

Yarn Appearance Grades

Grade	Index
A	130
B+	120
B	110
C+	100
C	90
D+	80
D	70
Below D	60

YARN NEPS are reported for the two yarn numbers spun for each lot of cotton. These results were obtained on a Uster Evenness Tester with Imperfection Indicator, Model B. This is an electronic instrument which detects and counts neps in yarn. The yarn is drawn through a set of condenser plates, approximately 8 mm in length. These plates create an electrical field which counts the neps when the yarn oversteps or understeps present limiting values. Yarn nep tests are made at a constant speed of 50 yards per minute for five minutes, for a total of 250 yards tested per observation. Two observations are considered a complete test. The total of the two observations is multiplied by two to obtain the number of yarn neps per 1,000 yards. Insufficient data has been collected to develop descriptive terms for determining relative levels of yarn neps.

SPINNING POTENTIAL YARN NUMBER indicates the finest yarn number that can be spun from a cotton sample without any end breakage when using specific processing procedures. In performing these tests, new travelers, draft gears, and twist gears are installed for the selected yarn number and it is spun for a 15-minute trial period. The yarn number selected is considered acceptable if there is an end breakage involving 5 to 15 of the 96 spindles employed during the trial run. If end breakages occur on less than 5 or more than 15 of the 96 spindles during the trial period, a different yarn number is selected to be spun for another 15-minute trial period until the acceptable end breakage rate is obtained. The acceptable trial period is also used for a warm-up period which is followed by a one-hour test period. The spinning potential yarn number is calculated from the deviation of the actual yarn number spun from the desired yarn number and the number of spindles with end breakage during the one-hour test run.

The following descriptive terms may be of help in determining the relative level of spinning potential yarn numbers in this report:

Spinning Potential Yarn Number (SPY No.)

Description	Short Staple Group	Medium Staple Group	Long Staple Group
Low	31 - 39	43 - 53	49 - 63
Average	40 - 48	54 - 64	64 - 78
High	49 - 57	65 - 75	79 - 93

Data Source: 365 short staple, 1,447 medium staple; and 144 long staple lots of cotton tested from the crops of 1974-78.

Chemical Finishing Tests

Information on bleaching and dyeing characteristics of different varieties and growths of raw cotton is useful to textile manufacturers. This information provides a basis for avoiding problems that may result from blending various varieties and growths of cotton with different dyeing properties. Data on chemical finishing properties thus may be used as a basis for selecting cottons of similar finishing properties. Small-scale finishing tests were made on three-gram samples of finisher drawing sliver. The Ahiba Texomat Dyer was used to make the various finishing tests on the cotton samples. The cotton sample was scoured in a solution containing water, sodium hydroxide, sodium silicate, and wetting agents. After the sample had been scoured, it was then bleached in a solution of water, sodium hydroxide, sodium silicate, hydrogen peroxide, and a sequestering agent. After bleaching, the sample was dyed in a solution of water, direct sky blue dye and sodium chloride.

COLOR MEASUREMENTS were made on unfinished, bleached and dyed cotton samples. These samples were measured on a Hunterlab Colorimeter, Model 25 M-3. The color values are reported in terms of reflectance (Rd), yellowness (+b) and blueness (-b). The Rd value gives percentages of diffused reflectance from 0 to 100. The +b value provides a measure of yellowness and the -b value provides a measure of blueness. The brightness or reflectance of the cotton samples increases as the percentage reflectance (Rd) increases. Similarly, the degree of either yellowness (+b) or blueness (-b) increases as the numbers increase.

Table 16.--Cotton: Standard machine settings and specifications for processing specified staple length groupings.

PROCESS		STAPLE LENGTH GROUP			
		Short	Medium	Long	Extra Long
1. PICKER					
Standard Atmospheric Conditions:					
Temperature	Degrees F.	75	75	75	75
Relative Humidity	Percent	60	60	60	60
Each test lot is processed through a finisher-type picker twice to produce the specified weight of lab	Ounces Per Yard	14	14	14	11
Type of Beater		Kirschner	Kirschner	Kirschner	Kirschner
Beater Speed	r.p.m.	1,000	1,000	1,000	1,000
Settings:					
Feed Roll to Beater	Inches	3/16	3/16	3/16	3/8
Grids to Beater, Top	Inches	5/16	5/16	5/16	9/16
Grids to Beater, Bottom	Inches	11/16	11/16	11/16	11/16
2. CARD					
Standard Atmospheric Conditions:					
Temperature	Degrees F.	75	75	75	75
Relative Humidity	Percent	60	60	60	60
Picker Lap Fed	Ounces Per Yard	14	14	14	11
Sliver Delivered	Grains Per Hour	50	50	50	40
Production Rate	Pounds Per Hour	12-1/2	9-1/2	6-1/2	4-1/2
Doffer Speed	r.p.m.	11	8	6	4
Cylinder Speed	r.p.m.	165	165	165	165
Flat Speed	Inches Per Minute	2-7/8	2-7/8	2-7/8	2-7/8
Licker-In Speed	r.p.m.	435	435	435	435
Clothing:					
Cylinder, Hollingsworth Metallic	Number	35	35	25	25
Doffer, Hollingsworth Metallic	Number	29	29	29	29
Flats, Fillet	Number	110	110	130	130
Settings:					
Feed Plate to Licker-In	Inches	0.010	0.010	0.010	0.017
Mote Knife to Licker-In, Im 59	Inches	.012	.012	.012	.012
Mote Knife to Licker-In, Bottom	Inches	.010	.010	.010	.010
Licker-In Screen to Cylinder	Inches	.034	.034	.034	.034
Licker-In to Cylinder	Inches	.007	.007	.007	.007
Flats to Cylinder, Back, Center and Front	Inches	.010	.010	.010	.010
Back Plate to Cylinder, Top	Inches	.022	.022	.022	.022
Back Plate to Cylinder, Bottom	Inches	.022	.022	.022	.022
Front Plate to Cylinder, Top	Inches	.029	.029	.029	.029
Front Plate to Cylinder, Bottom	Inches	.012	.012	.012	.012
Doffer to Cylinder	Inches	.007	.007	.007	.007
Cylinder Screen, Back	Inches	.022	.022	.022	.022
Cylinder Screen, Center	Inches	.034	.034	.034	.034
Cylinder Screen, Front	Inches	3/16	3/16	3/16	3/16
Doffer Comb to Doffer	Inches	.017	.017	.017	.017
Crusher Rolls Pressure	Pounds	281	281	281	281

Table 16.--continued.

PROCESS	STAPLE LENGTH GROUP			
	Short	Medium	Long	Extra Long
3. SLIVER LAPPER (Combed Only)				
Standard Atmospheric Conditions:				
Temperature..... Degrees F.	--	--	75	75
Relative Humidity..... Percent	--	--	60	60
Sliver Fed, 20 Each..... Grains Per Yard	--	--	42	42
Lap Delivered..... Grains Per Yard	--	--	808	808
Speed..... Yards Per Minute	--	--	46	46
4. COMBER (Model 52)				
Standard Atmospheric Conditions:				
Temperature..... Degrees F.	--	--	75	75
Relative Humidity..... Percent	--	--	60	60
Laps Fed, 6 Each..... Grains Per Yard	--	--	808	808
Sliver Delivered..... Grains Per Yard	--	--	50	40
Production Per Hour..... Pounds	--	--	22	22
Setting of Cushion Plate to Detaching Roll..... Inches	--	--	.33	.40
Nominal Waste..... Percent	--	--	16 to 17	16 to 17
5. DRAWING FRAME (Four Over Five)				
Standard Atmospheric Conditions:				
Temperature..... Degrees F.	75	75	75	75
Relative Humidity..... Percent	60	60	60	60
First Process:				
Sliver Fed, 8 Each..... Grains Per Yard	50	50	50	40
Sliver Delivered..... Grains Per Yard	55	53	53	42
Second Process:				
Sliver Fed, 8 Each..... Grains Per Yard	55	53	53	42
Sliver Delivered..... Grains Per Yard	60	55	55	44
Speed..... Yards Per Minute	36	36	36	36
Roll Settings (Center to Center):				
First to Third..... Inches	2-3/4	2-3/4	2-3/4	2-3/4
Third to Fourth..... Inches Plus Fiber Length	10/16	10/16	10/16	8/16
Fourth to Fifth..... Inches Plus Fiber Length	13/16	13/16	13/16	12/16
6. LONG DRAFT ROVING (8 X 4, 1-Apron Type)				
Standard Atmospheric Conditions:				
Temperature..... Degrees F.	75	75	75	75
Relative Humidity..... Percent	60	60	60	60
Sliver Fed..... Grains Per Yard	60	55	55	44
Roving Delivered..... Hank	1.30	1.80	1.80	4.25
Spindle Speed..... r.p.m.	1025	1025	1025	1025
Roll Settings (Center to Center):				
First to Second, Standard..... Inches	2-1/4	2-1/4	2-1/4	2-1/4
Second to Third..... Inches	1-3/8	1-1/2	1-5/8	1-11/16 to 1-7/8

Table 16.--continued.

PROCESS		STAPLE LENGTH GROUP			
		Short	Medium	Long	Extra Long
					1-7/8
7. LONG DRAFT SPINNING (2-Apron Type)					
Standard Atmospheric Conditions:					
Temperature	Degrees F.	75	75	75	75
Relative Humidity	Percent	65	65	65	65
Roving Fed Single	Hank	1.30	1.80	1.80	4.25
Twist Multiplier	Number	4.4	4.0	3.8	3.6
Carded Yarns	Number 1/	8s & 22s	22s & 50s	22s & 50s	--
Combed Yarns	Number	--	--	22s & 50s	50s & 80s
Spindle Speed	r.p.m. 2/	9000	9000	9000	9000
Roll Settings (Center to Center):					
First to Second, Standard	Inches	2-1/16	2-1/16	2-1/16	2-1/16
Second to Third, Standard	Inches	1-3/4	1-3/4	1-3/4	1-3/4
8. OPEN-END SPINNING 3/					
Standard Atmospheric Conditions:					
Temperature	Degrees F.	75	--	--	--
Relative Humidity	Percent	65	--	--	--
Sliver Fed	Grains Per Yard	60	--	--	--
Twist Multiplier	Number	4.5	--	--	--
Carded Yarns	Number	8s	--	--	--
Rotor Speed	r.p.m.	45,000	--	--	--
Rotor Diameter	mm	46	--	--	--
Opening Roll Speed	r.p.m.	7200	--	--	--

1/ Additional yarn is spun on a 96-spindle wide gage frame at 9,000 r.p.m. spindle speed to determine the spinning potential yarn number or the finest yarn number that can be spun without end breakage.

2/ All standard yarn numbers are spun on narrow gage frames with spindle speeds of 9,000 r.p.m. except for 8s, which are spun on a wide gage frame with spindle speed of 5,500 r.p.m.

3/ Barber Coleman Spin-Flex Open-End Frame.